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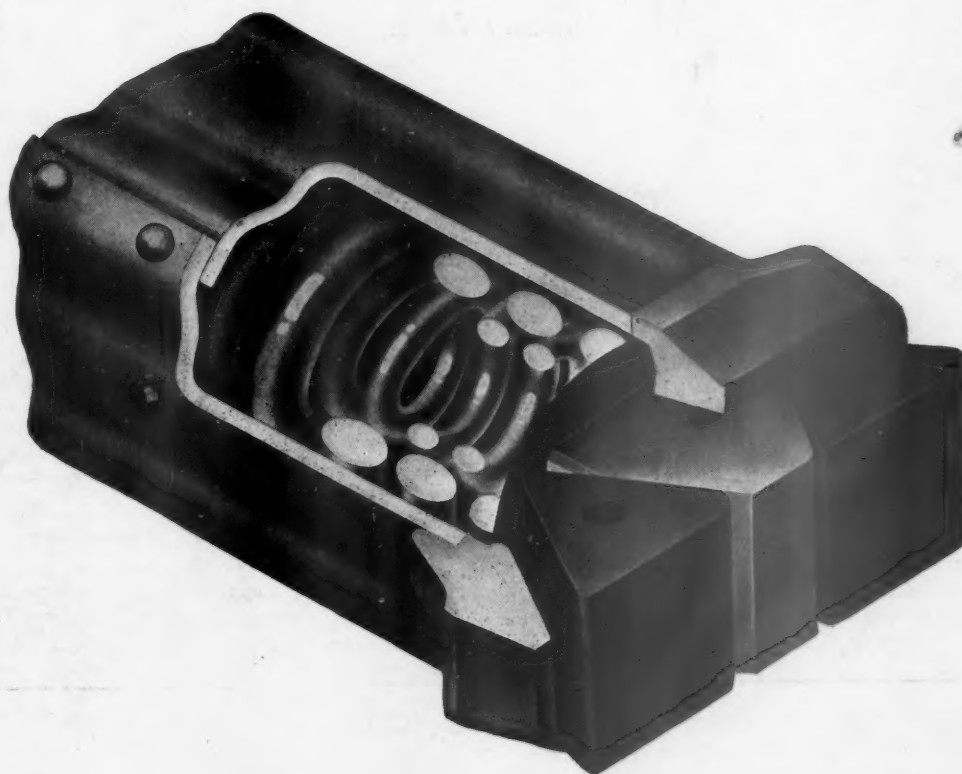
SIXTY-SEVENTH YEAR

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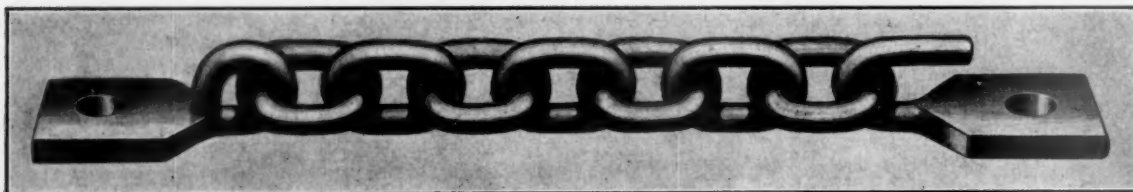
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# EDITORIAL

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In many railroad shops and roundhouses it is customary to pay gang leaders and assistant foremen a differential of five cents an hour over the maximum mechanic's rate. This small differential and the fact that gang leaders and assistant foremen are on an hourly basis, with pay reductions for all time

## The Five-Cent Differential

off, proves insufficient incentive to make men in the ranks aspire to these positions. Moreover, such men as do accept supervisory positions on an hourly basis of pay feel that their interests are more closely allied with the shopmen than with the managements, their sympathies being to a great extent with the former. That this condition is a reality and no mere supposition was forcibly illustrated at an important eastern terminal where, on the first day of the shopmen's strike, the entire plant was deserted except for two men, the master mechanic and general foreman. An entirely new organization had to be developed and that without the help of assistant foremen or gang leaders. The railroad in question is certainly paying a big price for its failure to put these men on a monthly rate and unite their interests with that of the railroad. Railroad shop foremen have seldom been trained, encouraged or paid in proportion to the importance of their work. This has a bad effect in normal times by reducing the incentive to become foremen. It is a common occurrence to hear a capable mechanic, who has shown evidence of executive ability, absolutely decline to accept a position as gang leader or assistant foreman on the ground that the additional responsibility and work involved would be in no way paid for by the five-cent differential over his present rate. Lower supervisory officers paid on this basis can hardly be blamed for a lack of enthusiasm and loyalty to roads which value their services so lightly.

The fact that 35 more persons were killed in grade crossing accidents on 66 of Class I roads in June and July, 1922, than in the same period in 1921

## Results of Careful Crossing Campaign

is no discouragement to the Careful Crossing campaign, but should be considered more as an indication of what would have happened if no campaign had been inaugurated. Although 1,300,000 posters were issued, an equal number of automobiles was sold in the same period. Considering that there are some 10,700,000 licensed automobiles in service in this country, the campaign has only begun to take effect. Publicity to the extent of some two miles of newspaper columns has been produced in the leading city newspapers and this together with the personal efforts of local railroad employees in speaking before public gatherings is only now starting to show favorable results while the slogan "Cross Crossings Cautiously" is just beginning to find a fixed place in the mind of the automobile driver. The railroads cannot afford to slacken their effort at the end of the four months' drive on September 30, but should make plans to carry on indefinitely this work which has been started so efficiently. The entire cost of the campaign to date is reported to be only \$50,000, a small sum compared with the damages which the railroads would have had to pay for only a few of the accidents that have been prevented. The railroads have a

vital interest in saving lives and damages and safety agents and claim agents should be encouraged to make plans for the coming year that will insure the Cross Crossings Cautiously campaign the continued enthusiasm of the public for in such lies the success of one of the most serious and comparatively expensive features of railway operation today.

The leaders of the striking shopmen decry violence and think it unfair that their organizations should be condemned for

## Blame for Violence

the illegal actions of a few individuals. But how is a union to be judged otherwise than by the control it exercises over its members? No employer could afford to enter into a contract with a union which could not keep its members from constantly walking out on outlaw strikes. There is no strength whatever in a union except that which it has from the collective action of its members. If members cannot be kept from doing things not authorized by the union as a whole acting through responsible officers then the term "union" is a misnomer. The transportation brotherhoods would not now stand very high in the eyes of anyone if they had not been able to put a stop to the sporadic walkouts which caused so much trouble a few weeks ago. As it is, by vigorous action of the officers, these unions have escaped with but little public condemnation and with the ability of their leaders to control their members unquestioned. The leaders of the striking shopmen apparently do not realize, however, their interest in bringing to justice the perpetrators of acts of violence. Only by proving their ability to keep their membership from such acts which are, it is to be hoped, considered contrary to the policy and best interests of the unions, can they convince anybody that the organizations they head are real unions rather than leaderless mobs. The blaming of organizations for illegal acts of a few individuals is not so unjust as the strike leaders would have it believed. Let them and their law-abiding members convince the public that they are doing their utmost to detect and bring to justice all the lawbreakers within their ranks and less of blame for their organizations will be heard when illegal acts occur. The mere denouncing of violence is unconvincing; an earnest effort to bring criminals to justice would have a force beyond that of words.

Since the coal strikes have been settled, there has been considerable comment both among railroad men and in the newspapers regarding the possibility of

## Locomotives as Important as Cars

a serious car shortage. Shippers naturally regard the car supply as an index of the general condition of the railroad, but operating officers recognize that it is only one factor in handling traffic and an ample supply of serviceable locomotives is quite as important. If the shopmen's strike continues for some time, the problem of repairing locomotives is likely to be more troublesome than that of keeping cars in service. It is comparatively easy to recruit and train car repairers, but locomotive work requires more skill and experience. For that reason, it is not unlikely that when cold weather comes the



supply of serviceable locomotives will be the limiting factor in determining how much business the railroads can handle. Within three months there will probably be snow storms in the northern states, and traffic will be near the peak. Roads that are short of power should look ahead now and decide whether they will have ample capacity in their own shops or whether it will be advisable to make contracts for repairs.

The New York Times of Sunday carried this paragraph in its railway strike story: "Commenting on the effectiveness

### Strikes and Public Opinion

of the strike in the Metropolitan district, John J. Dowd, chairman of the Central strike committee, yesterday called attention to the weekly review of the State Bureau of Farms and Markets, which said: 'The food supplies of New York City in the last week showed the effect of demoralized railroad transportation in considerably reduced receipts and increasingly late arrival of trains.' There is a saying—or would belief be a better word—that strikes of employees of public utilities are won or lost depending upon the effect of public opinion. There must be either something wrong with this saying or with the shop strikers' publicity. It does seem difficult to understand how the shopmen hope to curry the public's favor by showing that their strike is handicapping the transportation of this same public's essential food supply. They say that kicking and abusing a dog makes the unfortunate canine love its master all the more. Public opinion certainly is not on the side of the strikers in the present difficulties. Maybe the public has not been abused and kicked around enough. And then again, maybe the public is not like a dog, nor the striking shopmen the public's master.

The *Railway Age* last week pointed out that the orders for locomotives reported in its issues for August totaled 220—

### Another Big Week

making August, normally a month characterized by mid-summer dullness in equipment purchases, the best month so far in 1922 with two exceptions, April and July. Hardly was last week's issue on the press when orders were reported as having been placed by several roads totaling in number—exclusive of orders previously reported—225. All these orders will be found in this week's equipment and supply column, and possibly some additional orders reported between the time this is written and the time of going to press. This will give us a single week, at a time of the year when one should least expect it, better than all but two of the months so far this year. The week will be the best week we have had thus far this year and not the least factor of interest is that the total of 225, even without later additions, will approach the total for all 52 weeks of last year—namely 239. August and early September are not usually good months in locomotive purchases. However, there is no question, as there has been no question for quite an extended period of time, that the locomotives are urgently needed. Presumably prices are favorable. Fortunately, also, the net earnings of the carriers are at last such that equipment purchases can be more readily financed. The orders in the total of 225 include 100 Decapod and 15 Pacific for the Pennsylvania; 40 Mikado and 10 Pacific for the Chicago & North Western; 21 Mikado (in addition to 25 previously reported) and 4 Mountain for the Missouri Pacific; 12 Mikado for the Louisville & Nashville; 4 Mikado and 3 Pacific for the Monon and 9 locomotives on smaller orders.

In the summer and fall of 1920 the railways were called upon to handle the heaviest traffic in their history. Under the stress of necessity they rendered

### Remember the Lessons of 1920

more service than ever before. By reason of the demands made upon them, they set out to reach the goals of 30 miles per car per day and 30 tons per car set by the American Railway Association, and actually reached the average figure of 28.5 miles per car per day and 31.2 tons per car. By these measures they increased the capacity of the railroads of the country equivalent to nearly a million cars without the expenditure of any money for facilities, but by merely using more intensively those which they already possessed. With the removal of this pressure with the decline of business, car loading and car movement decreased accordingly. After months of light traffic the railways are again confronted with a freight movement which bids fair to equal or surpass that of 1920. With the country extremely short of coal only 60 days in advance of winter and with a grain crop of record proportions, in addition to a large movement of miscellaneous traffic, it is evident that the roads are facing a task of the first magnitude if they are to escape congestion and embargoes. There is now no time for delay. Present conditions demand that the lessons of 1920 be recalled and that measures which aided then be put into effect now before the facilities are congested.

At one time it was commonly understood that wood-destroying borers were to be encountered only in marine waters

### The Marine Borer Again

coming under the general classification of tropical or semi-tropical. The prevailing opinion had it that they were a serious menace to timber structures only along the South Atlantic seaboard, the Gulf Coast, and certain portions of the Pacific Coast. However, investigations made during the last five years have disclosed an increased activity of these forms of marine life, both in the way of intensified destruction in their usual haunts and in the extension of their manifestations to waters which had previously been assumed to be free from their inroads. Of most alarming proportions was the destructive action experienced in San Francisco bay during 1919 and 1920, which served largely to upset the prevailing understanding with respect to the activities of the borers, as well as the degree of immunity to be afforded by well-known protective measures. In a sense the problem of the marine borer had assumed the same perplexing character that has been encountered in the study of the action of sea water on concrete. Both vitally concern the railroads as large owners of waterfront property. The experience at San Francisco led to the formation of a committee of investigation which has been expanded through the agency of the National Research Council to an organization of national scope. Recently attention has been directed to New York harbor and the adjacent waters, with the result that both teredo and limnoria have been discovered in a number of locations. While there is nothing in the present outlook there to indicate any prospect of repeating the alarming results experienced in San Francisco bay, and although the scientific investigations have not yet been carried to a point where definite conclusions may be formulated, the investigations now under way will be worth many times what they cost by reason of the facts to be ascertained and also because they will be instrumental in disclosing possible defective conditions before they have progressed far enough to assume dangerous proportions. Moreover, those who are responsible for the prosecution of this nation-wide study are confident that increased knowledge of the subject will lead to the perfection of preventive measures.



## The Injunction in the Shop Employees' Strike

THE INJUNCTION obtained by Attorney General Daugherty from the federal court at Chicago in relation to the shop employees' strike is one of the most sweeping and important ever issued. There can be no question about its effect on the strike. Some evidence regarding that is already available. It was issued a few days before Labor Day. If it had not been issued, Labor Day probably would have been marked by more violence than any preceding day of the strike. Reports show, however, that Labor Day was a quiet day in the strike. The assertion of the power of the federal government still commands respect even in communities where sympathy with the strikers is so prevalent that local authorities have refused to give protection to railway employees and property. The additional protection afforded to men who are willing to work will cause a rapid increase in the number of men employed in the shops and hasten the end of the strike.

The injunction forbids roughly two classes of acts. First, it forbids issuance by the labor leaders of any instructions or public statements to members of their unions to induce them to do or say anything to cause any railway employee to leave his work or to cause any person to abstain from entering the employment of a railway. Officers and members of the unions are restrained from picketing or in any manner, by letters, circulars, telephone messages, word of mouth or interviews, encouraging any person to leave the employ of a railroad, or to refrain from entering such employ. Interference with employees, going to or returning from work by opprobrious epithets, jeers, taunts or entreaties is forbidden.

Second, the injunction prohibits conspiracies or agreements to hinder transportation, interference with or obstruction of railway operation in any way, trespassing on railway property and every form of intimidation or violence.

Many persons will question the wisdom of or justification for the sweeping prohibitions of the class of acts first mentioned. Whether from a purely legal point of view they infringe upon the rights of free speech and the freedom of the press is one question. The courts are the bodies to determine that. Whether as a matter of public policy it is desirable to forbid such acts is another question. The plain purpose of the labor provisions of the Transportation Act is to prevent labor controversies from resulting in interruptions of transportation by reason of lockouts or strikes. The Attorney General's statement asking for an injunction and the phraseology of the injunction order do not deny, and therefore tacitly concede, the legal right of the shop employees to strike. But if they have a legal right to strike, have they not also the legal right to do everything of a peaceful character which may help them to make the strike successful?

Regardless of the legal questions involved, if the right to strike be conceded, can it then be right or wise to prohibit the labor leaders from issuing statements or instructions to their members, or their members from acting in accordance with these statements and instructions as long as the leaders and the men do not resort to or incite intimidation and violence? It is obvious that to prohibit free communication between the leaders and the members of their unions and to prohibit the strikers from trying peacefully to persuade men not to work, is an invitation to labor leaders and those in sympathy with them to denounce the government and courts for denying the right of free speech and to include in their denunciations the owners and managers of the railways as having induced the government and courts to take this action.

Of course no similar questions can be raised from either the standpoint of law or public policy regarding the action

of the government and the courts in taking drastic action to stop intimidation and violence in connection with the strike. It is perfectly useless for the labor leaders to deny, as some of them do, that the strikers have, throughout the country, resorted to intimidation and violence in every form. The evidence regarding what they have done is so voluminous and conclusive that to deny what it plainly shows discredits those who make the denials, and makes most people feel that their denials really amount to a defense and encouragement of the very class of acts which they deny are being committed. It is the duty of every government to suppress intimidation and violence in every form and for whatever purpose. When the purpose of intimidation and violence is that of interrupting interstate transportation and inflicting incalculable loss and suffering not merely on the railways but on every class of the public, the duty of the federal government, whose authority and power are the only authority and power extending throughout the entire country, to step in and suppress the intimidation and violence becomes plain beyond all question. The strikers by their own conduct, whether incited and approved by their leaders or not, have compelled the government to choose whether it would take the step it has taken or abdicate its most important functions.

It is a notable fact that in the statements the labor leaders have issued denouncing the injunction, they have sought to justify their denunciations solely by criticisms of it based upon its alleged attack upon the rights of free speech and the freedom of the press. If the injunction had been directed only against intimidation and violence and incitements to them, it would have been much more difficult for the labor leaders to have influenced any considerable number of people by their complaints against it. Neither they nor any other persons except avowed revolutionaries attempt to justify the use of threats, assaults, arson, and murder in labor disputes.

What the government really is aiming at, of course, is to stop intimidation and violence for the purpose of interrupting transportation and everything said or done having this object. The sweeping prohibitions of the injunction can be justified only upon the ground that if it were made less sweeping it would not accomplish the vital object it is meant to attain.

## The Coal Shortage and the Railroad Strike

WITH THE COUNTRY threatened by, and, indeed, already experiencing, a serious coal shortage, it is most important that the responsibility for the situation should be apportioned fairly by the public among those to whom it belongs. No facts available will help the public more to apportion this responsibility than the following: In the week ended August 19, the last week before the termination of the coal strike had enabled work in the bituminous mines to be generally resumed, the amount of bituminous coal produced and transported was 4,609,000 tons. In the week ended September 2, the second week after the coal strike was ended, the total amount of coal produced by the mines and transported by the railways was about 9,500,000 tons, an increase of over 100 per cent. The *Railway Age* said in an editorial in its issue of August 5: "If the coal strike should end today the railroads could immediately increase by 100 to 150 per cent the amount of coal they are transporting, regardless of the shop employees' strike." The results have completely vindicated this estimate already.

Since the railways in such short time have, in spite of the shopmen's strike, proved able to make possible a production of such a largely increased tonnage of coal, is there still danger of a serious coal shortage, and, if so, why?

There is still danger and the reason for it is to be found

in the developments which have occurred in connection with the coal strike and the railway shop employees' strike. The coal strike began on April 1, almost 23 weeks ago. Before it began the mines were producing and the railways were moving an average of 10,700,000 tons of coal a week. The coal strike immediately cut this production down to less than 3,600,000 tons a week and up to the time the railroad strike began on July 1, the coal strike had prevented it from being increased to more than 5,250,000 tons a week. After the railroad strike began production declined to 4,200,000 tons a week, and, as already shown, up to the time the coal strike was ended, production was running at the rate of only about 4,600,000 tons a week. In the 20 weeks that the coal strike was in full effect the total production of coal was only approximately 90,000,000 tons, whereas, if the coal strike had not occurred it could easily have amounted to 180,000,000 to 200,000,000 tons. Therefore, the country today lacks approximately 90,000,000 tons of coal which it could have had if the coal strike had not occurred.

It is the deficiency of production, due to the coal strike, which is almost entirely, if not entirely, responsible for the present and prospective shortage of coal. For this deficiency of production the coal operators, the miners and the Government can divide between themselves the blame. None of the blame for it can fairly be laid upon the railroads.

What of the future? Can the railways, in spite of the shop employees' strike, transport enough coal fully to make up for the shortage that has accrued? All past experience, as well as existing conditions, indicate that they cannot. It is estimated that the coal mines of the country, if worked to their capacity, could produce about 19,000,000 tons of bituminous coal a week. The railways, if we may judge by past experience, cannot, when working to their capacity, transport an average of 12,000,000 tons a week. The railways have an extraordinary amount of equipment in bad order, and there will be for some time to come conditions which probably will make it impossible for them to move coal to their normal maximum capacity. While favorable weather conditions prevail, they may be able to move an average of 11,000,000 tons a week. It is not reasonably to be expected that they will be able to do much better than this on the average. It is impossible to have such a strike as the shop employees without having it interfere to some extent with transportation efficiency. This is merely another way of saying that in the railroad business, as in every other line of human endeavor, it is impossible to make an omelet without breaking eggs. If the railroads succeed in moving an average of 11,000,000 tons of coal a week, they will deserve not criticism, but the country's congratulations and thanks.

If they are unable to do better than this, how will the country fare? The total production of coal for the year 1922 up to September 2, was 223,521,000 tons. After that week there remained 18 weeks of the present year. If the railways should move during these weeks an average of 11,000,000 tons a week, this would make the country's total bituminous production for the year about 422,000,000 tons. This would be 20,000,000 tons larger than in 1921, but it would be 115,000,000 tons less than the average annual production in the four years ended with 1920. The result probably would be that throughout the fall and winter the country would be without substantial surplus supplies and that local and sporadic shortages constantly would develop; but if the available coal were well distributed, and domestic consumers and essential industries were given priority, the country could get through until spring without any real suffering and without serious interference with general business.

Based on past experience and present conditions, the *Railway Age* believes that this will be the outcome. The prospects certainly do not encourage optimism, but at the same time they do not justify deep pessimism because there is

reason to believe that there will be closer co-operation and less friction between the railways, the coal operators and the coal dealers, due to the influence exerted by the government coal distributor and the Interstate Commerce Commission, than there have often been in the past. In the absence of such co-operation there probably would be serious trouble and all the influence of the government and public opinion should be exerted to bring about this essential co-operation.

## Six Collisions

THE INTERSTATE COMMERCE COMMISSION issued on August 28 its report on the cause of the collision of passenger trains at East Fort Madison, Ill., on May 29, when 48 passengers were injured; from which it appears that the engineman of the westbound train (who was killed) ran past three fixed signals, taking no effective measures to apply the brakes; though it seems, from the testimony of the fireman, that he was awake, saw the signals, had his hand on the brake-valve, and acknowledged the communications of the fireman. As is well said by Chief W. P. Borland, in the report, this is a case which shows that the use of automatic train stop apparatus is necessary to guard against the occurrence of similar collisions in the future.

And by a somewhat unusual succession of collisions, this same point has been demonstrated twice since then; two collisions, in each of which the engineman knew where he was going (had not "lost his bearings"), was wide awake, and had the benefit of practically all the aid that could be expected from the monitorship of the fireman. These three collisions, with three others of somewhat similar character, are tabulated as follows:

1. East Ft. Madison, Ill.; A. T. & S. F., May 29. Passengers injured, 48; engineman at fault was killed. Abstract in *Railway Age*, September 2, page 427.
2. Leeds, Mo.; Missouri Pacific, July 12. Passengers killed, 3; injured, 91. Engineman injured and no statement made by him. Mistake by all hands in reading train order; the reading evidently was perfunctory. Fireman was busy firing. Abstract in *Railway Age*, August 19.
3. Alsuma, Okl.; Missouri, Kansas & Texas, July 19. Passengers injured, 19. Wrong reading of train order by all members of freight train crew, and they met a passenger train, which they assumed had been annulled.
4. Logan, Mo.; St. Louis-San Francisco, July 22. Passengers killed, 5; injured, 107. Engineman of passenger train No. 9, who was killed, ran past distant and home block signals. Fireman not blamed by inspector. Reported in *Railway Age*, July 29, page 217.
5. Lester, Ohio; Pennsylvania System, August 1. Passengers killed, 4. Engineman said he misread his watch, and he passed from double to single track and met opposing train. Every member of crew knew that he was encroaching on the superior train's right, but none took action in season. Reported in *Railway Age*, August 12, page 310.
6. Ellwood City, Pa.; Baltimore & Ohio, August 6. Passengers injured, 31. Engineman of passenger train No. 9 ran with speed not under control even after having slackened at a cautionary automatic block signal (a grade or "tonnage" signal) indicating that he was in the same block with the freight train preceding. Fireman not blamed by inspector.

Numbers 4 and 6 are almost exactly like Ft. Madison, while numbers 2, 3 and 5 are like that case in that the fireman's monitorship proved of no benefit. The recognized safeguards are (1) visual block signals, (2) visual and audible block signals, and (3) block signals supplemented by automatic brake-setting apparatus. These three collisions (2, 3 and 5) occurred on lines having none of these safeguards. An audible signal either in the cab, like those on the Northern of France or the Great Western of England; or on the roadway, like those on the Boston & Albany, would arouse a sleepy or absent-minded engineman, or a fireman absorbed in his firing; but here were enginemen who failed, disastrously, when wide awake and, it seems, were fully cognizant of their surroundings. Advocates of automatic stops will have no lack of "frightful examples" in current collision records to enforce their arguments.

The advocate of automatic stops, however, will also have to look at this record in another aspect. It is quite generally agreed that such a refinement as the automatic stop should



be introduced first on the busiest lines. The device is designed as a safeguard against disasters due to inattention on the part of enginemen (and against nothing else) and it is on the busiest lines that there will be the largest number of enginemen; the most frequent chances of error. But these collisions occurred on lines that hardly come within that class; and four of them were on lines not yet equipped with automatic block signals. The sixth was on the Baltimore & Ohio main line to Chicago, but not on the section named in the Interstate Commerce Commission's order requiring stops to be installed. Number 1 was on a main line of the Santa Fe; but on a section which has no automatic signals. Number 4 was on a line covered by the I. C. C. order, but it is single track. The other three lines probably would be put by the Commission near the bottom of its list, one of them (No. 3) being a line of a company not named in the I. C. C. order. In short, the problem of "selecting" the locations where signals shall be reinforced by automatic stops—to adopt the phrase used in the British report—is a perplexing one. The reader who goes through the full reports of the Bureau of Safety on these collisions will find a variety of circumstances that may well puzzle the wisest governmental authority.

The one point that is clear is that the fitting of all danger points with automatic apparatus will be a work of years; and that, therefore, the duty of correcting our faults by well-known existing methods presses, today, the same as ever. Surprise checking still calls for the attention of every superintendent. Surprise checking is not a cure-all; but it has the merit of *helping to promote all other disciplinary measures*. The trainmaster who keeps this feature at high efficiency is not likely to forget or put in the background any important feature of train-safety. In this connection everyone should recall—and answer (to himself)—the complaint of a well-known officer of an Eastern trunk line; that he needed ten times more surprise checking than his appropriation allowed for. Was he right?

## What Causes Inefficiency On the Railroads?

RAILROAD EXECUTIVES must take more aggressive and scientific steps to improve the relations between the men and the managements. The effect of the very best facilities and equipment can be completely nullified unless the men who operate them understand clearly just what is expected of them and are interested in their work and encouraged to put forth their best efforts. No greater gain can be made in efficiency and increased production than by securing a greater degree of interest and co-operation from the workmen.

"If we wish men to get on with their work wholeheartedly instead of devoting 60 per cent of their time doing their work and 40 per cent 'doing the boss,' then real grievances must be removed." These are not the words of a visionary or a theorist. They come from the head of a large manufacturing industry in Great Britain—a man noted for his sound common sense and for the splendid progress that he has made in securing the hearty co-operation of his employees. They are quoted from the book "The Human Factor in Business," by B. Seeborn Rowntree, who was also director of the welfare department at the Ministry of Munitions during the war.

There is unquestionably something seriously wrong in the industrial and transportation world today. No one will deny this.

We have suggested that conditions on the railways might be improved substantially through the development of something corresponding to the personnel departments that have

given such an excellent account of themselves in certain of the larger and more progressive industrial organizations. Before considering the scope and duties of such a department it might be well to analyze conditions and determine the fundamental causes which lie at the bottom of most of the troubles in the industrial world today.

W. L. Mackenzie King, now Premier of the Dominion of Canada and formerly Minister of Labor of that country, has for many years been a close student of the industrial problem and has written a book entitled, "Industry and Humanity," a study in the principles underlying industrial reconstruction. In the introduction to this book he says: "The existing attitude of capital and labor toward each other is too largely one of mistrust born of fear. \* \* \* \* \* If industry is to serve humanity, this attitude must be changed to one of trust, inspired by faith." In a later chapter (which discusses "the fears which circumscribe the freedom of effort" of labor, capital, management and the community), after outlining the fears which confront labor and capital, this significant statement appears: "It is worthy of note that as capital's fears of labor diminish, there appears to be a corresponding diminution in the fears by labor of capital, and *vice versa*. Remove all likelihood of strikes or attempts at restriction of output, and immediately the stimulus to investment of capital is increased, with corresponding increase in labor's opportunity of employment and reward. Similarly, remove the fear of unjust exactions by managements and capital, and of a reduction in remuneration where effort is increased, and immediately fresh stores of energy are released by labor, with certainty of gain to investment."

Mr. Rowntree in his book, "The Human Factor in Business," sums the situation up in this way: "It is coming to be generally realized that something must be done to render the economic position of the manual workers more secure. Although an appreciable number of them are in situations which hold out every prospect of permanency, the majority have constantly hovering over them a cloud of uncertainty with regard to the future. At any time they may be discharged at a week's or possibly an hour's notice, and since any reserve they have laid up is likely to be very slender, in times of trade depression they may be plunged with their families into serious want and privation. Even those who escape this tragedy, if they live to old age, will almost inevitably find themselves in very straitened conditions."

The fluctuations in business are not easily controlled. Much has been done in this country through the federal reserve banks and the prevention of crop failures to prevent extreme fluctuations, and much thought is being given by economists, financiers, engineers and others to developing measures which will overcome, at least to some extent, the cyclic business depressions. The individual industries, however, can do much to stabilize employment, at least in their own organizations, regardless of the larger measures which may be adopted by the country or communities as a whole.

Railroad employees feel the result not only of these fluctuations in business, but also, in some departments, of the seasonal changes. Much can be done to relieve these on the railroads if the problem is gone after in the right way. The difficulty is that it has not been given the real attention that its importance deserves. There are many things that can be done by a railroad or an industrial organization to insure greater permanency of employment. These matters, however, cannot be handled in a haphazard way, but require the most painstaking and thorough study and attention on the part of men who are specially fitted to handle them; these men, moreover, must have the hearty support and backing of the chief executive and the board of directors.

It is claimed by some that a railroad or a corporation is not justified in going so far as this to protect its employees. They will point out, for instance, specific instances of men



who have been well treated, who have not shown an appreciation of this treatment when emergencies came and it was assumed that they would put forth extra efforts or stand loyally by their employers. Such cases, however, are possibly the exceptions that prove the rule. At any rate, there are not a few instances of large companies whose principal strength today lies in the fact that they have unusually loyal bodies of employees who are putting forth their best efforts and who have been encouraged to do so through the liberal policies of the companies in dealing with them.

Fear, as Mackenzie King has said, lies at the very root of the unrest in the transportation and industrial world today. It must be banished; it has been to a large degree in some organizations. Why not in all? Ought not the railroads, because they are large employers, because their difficulties in dealing with men so widely scattered are so pronounced, and because their further development and progress are so vital to the country, deal more definitely and aggressively with the problem of getting the best and most loyal service from their employees? If they do not, what may it not cost them in the future in friction, strife and inefficiency?

## New Books

*The Invention of the Track Circuit.* 113 pages, 6½ in. x 9½ in. Paper covers; illustrated. Published by the Signal Section of the American Railway Association, H. S. Balliet, Secretary, 30 Vesey Street, New York. Price \$1.50.

This is a historical sketch designed as a memorial of Dr. William Robinson, the inventor of the track circuit, and it was published on August 20, the fiftieth anniversary of Robinson's original patent. It is the work of a committee—H. S. Balliet, K. E. Kellenberger and H. M. Sperry—appointed by the Signal Section at its meeting in June, 1921, in connection with resolutions adopted in memory of Dr. Robinson whose death occurred at Brooklyn, N. Y., on January 2, 1921.

The track circuit—the transmission of the electric current through the rails of a mile of track, as a means of giving a train of cars complete and ideal automatic control of a stop-signal at the rear to protect it against following trains—is a wonder, today, as it was fifty years ago, and the authors of this sketch have not needed to add any romance to the subject. It is a romance ready-made; while at the same time the story is an every-day fact. As showing the universal importance of this element in the signaling field—and therefore in the general scheme of the safety and celerity of train movement—the governmental statistics are quoted, showing, as of January 1, 1921, over 60,000 miles of track in the United States equipped with automatic block signals; which means 60,000 (more or less) delicate electro-magnetic instruments—track relays—in service day and night guarding the safety of passengers and trainmen and millions of dollars in property. In the New York subways alone, the operations of these instruments in a single day mount to numbers almost incomprehensible. The total of the individual passengers thus protected is *quite entirely* incomprehensible.

The book is divided into four parts. The first is a story of Dr. Robinson's activities made up largely from his own writings; the second is a notice of William A. Baldwin, who was general superintendent of the Philadelphia & Erie, now a part of the Pennsylvania System, and who was the first to recognize the importance of Robinson's invention and to give him a chance to try it in service. Robinson made an exhibition at the American Institute Fair in New York City in 1870 and, after the fair, sent his left-over circulars to railroad men in different parts of the country; and

Baldwin's response to this circular led to the first installation at Kinzua, Pa. Theodore N. Ely, afterward chief of motive power of the Pennsylvania Railroad, was at that time assistant to Mr. Baldwin and had a share in making the arrangements for operation.

Part 3 is a description of the track circuit and its uses with all modern additions and modifications, written by J. P. Coleman of the Union Switch & Signal Co.

Part 4 is a short sketch by T. S. Lascelles, of London, telling of the introduction of the track circuit in Europe. Mr. Lascelles says that W. R. Sykes, the well-known inventor of the controlled manual block signal apparatus, experimented with the track circuit perhaps as early as did Robinson of this country. However, for well-known reasons, the track circuit made no progress in Europe and not until Americans introduced automatic signals there, many years later, was anything serious along practical lines accomplished.

The first part of this book contains an interesting compilation of facts not very generally known. The first installation was open circuit; but Robinson was the most severe critic of his own work and he soon arranged a closed circuit, and made other improvements. He seems to have been an early experimenter in the use of fibre for insulation, and about 1876 he devised a successful channel pin for fastening bond wires to rails. The second installation was at Irvine, Pa., and in both cases there was not only a visual signal but also a loud gong, which no engineman could pass without hearing it.

In December, 1875, Mr. Robinson moved from Pennsylvania to Boston and he made a small installation on the Boston & Lowell; and he started the company that subsequently became the Union Switch & Signal Company. In the three following years he made installations on the Boston & Providence and the Old Colony.

Robinson was born in Ireland, in 1840, and was graduated from Wesleyan University, Middletown, Conn., in 1865. He made other important inventions.

*Railway Electric Traction*, by F. W. Carter. 6 in. by 9 in., 412 pages, 204 illustrations including 13 insert plates. Bound in cloth. Published by Longmans, Green & Co., Fourth Ave. and 30th St., New York.

The book was written in England but the text is in no way confined to English methods as all of the principal installations of heavy electric traction throughout the world are discussed. There are ten chapters and an appendix. The first chapter is introductory and deals with the reasons for adopting electric traction and the relative merits of direct and alternating current systems. The author declares himself in favor of the direct current system. The Locomotive is the title of chapter II which is the longest one in the book. The design of the locomotive with relation to the effect on track is discussed extensively. Chapter III bears the title "Railway Motors" and is quite exhaustive. Motor control is presented in considerable detail in chapter IV. Chapter V deals with the distribution system including several types of third rail and overhead construction. Methods for determining sag, tension, etc., are included. Chapter VI deals briefly with power equipment. Systems of electrification are outlined in chapter VII. Chapters VIII and IX include a discussion of such subjects as train resistance, methods for calculating speed, time, and distance, energy requirements, etc. Power Supply is the subject of chapter X which deals broadly with sub-stations and power plants. The appendix consists of a table of locomotive statistics which includes most of the principal electric traction systems in the United States and Europe and gives data concerning the general characteristics of the various locomotives used.

## Letters to the Editor

[The RAILWAY AGE welcomes letters from its readers and especially those containing constructive suggestions for improvements in the railway field. Short letters—about 250 words—are particularly appreciated. The editors do not hold themselves responsible for facts or opinions expressed.]

### Revision of Operating Expense Classification

NEW YORK.

TO THE EDITOR:

The proposed revision of the operating expense classification, offered for the consideration of the Railway Accounting Officers' Association at the latter's annual meeting in June, is drastic. It would reduce the number of primary accounts from 197 to 69. The recommendations bear the mark of careful study. The extent of the revision it is explained is the reduction of accounting expense and the presentation of the figures in a simple, logical form so that essential facts may not be obscured by meaningless detail.

Any figures that should be compiled at all will bear the expense involved many times over. If the question of expense can be seriously raised the figures are not statistics but mere idle compilations and worthless at any cost. It would clear the air if the question of cost were never permitted to enter (except, of course, that the compilation should be by the cheapest method possible), but in its place were sharply raised the question only, are the figures useful; do they play real part in determining action. This is the only criterion.

It is not plain from the report at hand whether the committee recommends the entire abolition of the figures eliminated or only their elimination from the statistics required by the I. C. C. If there is no reduction in the compilations the saving by cutting figures out of the I. C. C. statistics is not great. If it is urged that the irregular detail clutters up and obscures the general presentation to which the I. C. C. figures should be confined, the remedy is by classifying the figures objected to in a subordinate order of detail where it applies. It is of course obvious that certain figures which may be significant on a particular road have no place in the statistics of roads as a whole. An illustration of this is "Coal and ore docks" or the sub-division of enginemen into steam locomotive enginemen and motormen. But the eliminations are not confined to figures of this character.

It is important to keep clearly in mind the purpose which any railroad statistics for the public are to serve. In the first place the statistical schedule prescribed is a device for identifying and verifying beyond cavil the final figure of net railway operating income. That is, the statistics are an auditing facility. Not unless there is reasonable assurance that reserves adequate and not too great have been set up for depreciation and contingencies is the net income figure even approximately reliable. To cover depreciation on all the several kinds of property into a single account is to merge essential distinctions into a general blur that baffles verification. If the depreciation charge is to be made at all it must be specific to the several kinds of property and must continue to be compiled in this form before reduction to a composite figure. We are aware there is a "no depreciation charge" school but we believe its position is untenable. Be that as it may the "no depreciation charge" theory does not prevail in this instance but it is only urged that the individual depreciation charge for each class of property need not be

reported. In the plan for simplification proposed, of the 128 accounts abolished, 50 (40 per cent of the whole reduction) are had by destroying the identity of the depreciation charge and therefore come under the general objection here urged.

In the next place, railroads have been seriously criticized for their lack of cost accounts. Only as recently as within the last year has there been sharply raised the issue whether maintenance of equipment by outside shops was a measure of economy or of strategy, and in far too many cases the railroads had not at hand their own cost accounts to meet malign insinuations. But apart from such extraordinary situations railroads should have their costs currently to know at all times whether they are doing their work in the cheapest possible way. The writer is fully aware of the difficulties and the limbo of easy fallacies where so large and so variable a proportion of the unit cost is "overhead." But the administrative possibilities now coming to be so well understood by industrial managers is unknown to most railroad managers. To consolidate all the 16 accounts of building maintenance into a single head is to set up a figure that has no significance and at the same time precludes any cost accounting where buildings are involved. But on the other hand the consolidation of "Underground power tubes," "Tunnels and subways," "Right of way fences," "Snow and sand fences," "Crossings and signs," "Wharves and docks," "Coal and ore wharves" we believe to be legitimate where figures for several roads are taken together, because these are irregular parts of the transportation plant depending on local conditions and cannot be set against aggregate line mileage or aggregate performance.

So also the creation of the consolidated account "Other roadway and track maintenance" seems altogether excellent. The consolidation of the items of "Electric power system" is doubtful because while the mileage thus equipped is at present inconsequential it will soon be greatly enlarged and the detail is necessary to analyze the expense of such maintenance. The comment that separation of the labor cost of applying ties, rails, ballast and other track materials is a practical impossibility we do not believe well taken in view of the long experience on some roads in doing this very thing accurately on the basis of actual time spent.

The tender regard of "insurance" as an item in the classification we believe unjustified. It is properly a manager's memorandum by which he watches the rate of the insurance charge and the variation in the amount of insurance carried, but the cause of the insurance expense is neither the rate of charge nor essentially the proportion of insurance carried, but the aggregate of things exposed to risk and the extent of that risk. And on the function performed should be laid the burden of any risk incidental to their use. "Insurance" is a mere average of risk costs.

The old offenders "Stationery and Printing" and "Other expenses" are at last given the *coup de grace* which they have so long richly deserved. But the general casualty account does not commend itself. We believe each department, representing as it does assignment of function, should assume the burden of all its casualties. There is much to be gained by an expert oversight of all casualties and such supervision could very well be erected into a department as that of the Mechanical Engineer or the Superintendent of Tests; but the department where the casualty occurred should not be permitted in the general accounts to pass over its costs of this character merely for the purpose of creating a statistical entity called casualties. These are not casualties of the road at large but they are specifically referable to the several functions that affect the operation of the property.

In the "Transportation" accounts there has been a reduction from 50 to 15. Of the 35 accounts thus eliminated from "transportation," 5 have been transferred to the new general head "Casualties," 2 to "Miscellaneous operations," 4 have been eliminated altogether and 30 have been consolidated



to 6. Taking up these consolidations by turn, the merger of 4 accounts to "Station service" appears to be eminently correct and also the elimination of the distinction between electric motor and steam engine drivers, both on the road and in the yard. The consolidation of "Despatchers" with "Superintendence" is questionable. The remaining consolidations respectively on the line and in the yard abolish the time honored "locomotive performance sheet" items by merging their amounts respectively with train service and yard service expense. With due allowance for the exaggerated importance sometimes attached to these figures by themselves we believe they should not be allowed so easily to pass into the discard. In cases of the road expense the grouping of engine and train service expense has definite advantages but the inclusion in the same item of crossing protection and drawbridge operation is undesirable. In case of the yard expense the merger of yardmasters, clerks and switch tenders with engine expense is open to objection on similar grounds.

The transfer of "Operating sleeping cars" to "Miscellaneous operations" is correct but the elimination of "Express service" we believe is a mistake. The changes in "Traffic" and "General Expense" are admirable.

Behind these running comments lies the idea that the science of disbursement accounts and statistics is in its infancy. Its possibilities in "disciplining a property" as William Mahl used to say—holding it in economic balance and co-ordination at all times—are little realized. With the passing of competition in rates, with the progressive merger of the less to the greater unit in all the processes of the transportation operation there is grave economic menace, through loss of identity of the forces and values committed to a result desired, in sudden perfunctoriness.

A grave illustration at the instant is the "national agreement" whereby labor has endeavored to protect itself by limiting its adaptability on the theory that in no other way can it be secured against economic aggressions of mass capital. We believe a more exhaustive analysis of situations and processes is vital to all interests and the way to such philosophic insight to the problems is by cost accounting and statistics. A grave responsibility is now laid upon the Interstate Commerce Commission that railroads be not permitted to degenerate to the "cost plus" basis of operations for which the public foot the bills in helpless impotency.

J. SHIRLEY EATON.

## Get Better Service From Freight Cars

BROOKFIELD, MO.

TO THE EDITOR:

To all appearances the shopmen's strike has about spent itself and with the advent of newly mined coal we will again be on the road to a rush business and incidentally to the worst car shortage we ever had, especially so far as coal cars, box and stock cars are concerned.

During and after government control I had many opportunities to study car shortages in various forms and in various places. I invariably found that inefficient distribution of the freight cars was a material factor in the shortage. Regardless of hard work and efforts on the part of officers pointing out different ways and methods of remedying conditions by circulars and words, the men behind the gun distributing the cars fell down and the railroads and the public suffered.

Henry Ford's success lies in the perfect system of distribution of his products, by experts. He does not apply two cars on one order unless he can sell both. We are applying two and sometimes three and more cars on orders for one. It is wastage.

We know the empties must go to the loads, but we also

know that empties do not have to move in both directions, nor do more empties have to move towards the loads than can be used.

It is the wasted surplus of cars moving aimlessly around; cars furnished at a station where a car is unloading; conflicting tide orders; cars moving around unknowingly picked up by locals, and odds and ends of that nature, that I speak about, which if efficiently distributed will increase the loading, I should think, 25 per cent without a new car being built. Don't be skeptical and say it can't be done; I have done it and can demonstrate it to any doubter.

We pick out the cream of employees for positions as traveling passenger and freight agents, trainmasters and traveling auditors, but the man who distributes the freight cars slides into his job to fill a vacancy by the seniority route as any ordinary clerk. It is wrong—the very life blood of the railroad is at stake in furnishing cars and in furnishing them promptly. While looking into such matters at New York, Detroit, Buffalo, Denver, Minneapolis, Kansas City, St. Louis, Chicago and Ft. Worth, I got a fair idea of our troubles in distributing cars; there were as many methods as there were division points. Superintendents and other officers were too busy to give such matters much attention and when a car shortage occurred it was taken for granted it was so. It was not so. It was a case of inefficient distribution by incompetent men—men who had no training in the intricate workings of industrial switching and loading in our great switching terminals, or workings of local and through freights, and no knowledge of the shippers on the line and various characteristics of stations and agents, and who did not know the difference between a car with a hot box and one with a drawbar out, etc.

The railroad manager, who will rid himself of mediocre car distributors and put men on the job full of pep and energy and experience, and have them do nothing but see that no cars move aimlessly around, will have the satisfaction of being able to give 100 per cent service to the public with the cars available.

We are distributing cars today as we did 50 years ago, but our locomotives and other railroad tools have changed, so why not change the distribution of cars from a basis of incompetency to a basis of efficiency?

If you travel on freight trains you will learn from conductors and trainmen the facts outlined above.

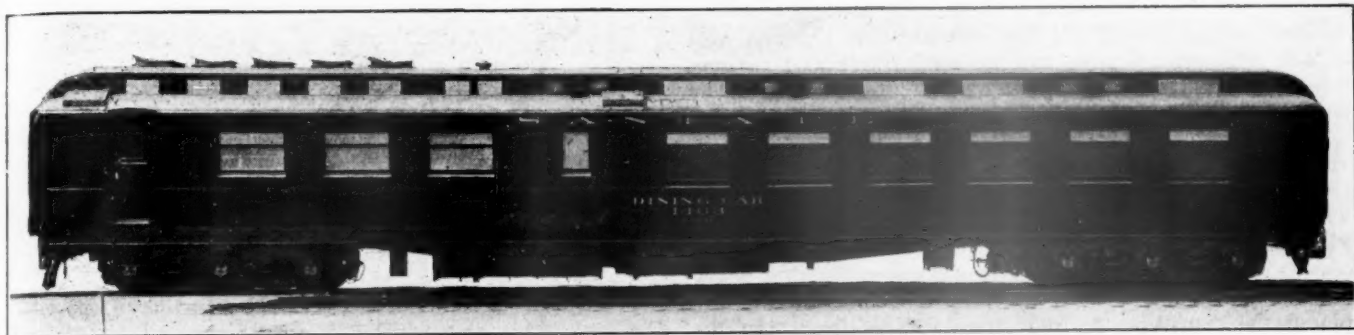
The general office car distributor doesn't know the division car distributor, or his methods, in nine out of ten cases. Not one per cent of them have ever traveled over the road or seen the agents or shippers or the local conductor with whom they do business every day and who could give them hundreds of pointers. In some places the chief dispatcher attempts to use 30 minutes of his time for the distribution of cars; the result is failure.

If a railroad loads 1,500 cars a day and is short 500, it is losing at least 300 cars per day by improper distribution. It is of no use to send inexperienced inspectors out to inspect and check up what everybody knows. The science of proper distribution of cars is something that should be taken into consideration and which will greatly minimize our car shortages at no extra expense.

H. R. DREYER.

Forty-five thousand dollars is the sum said to have been paid by the Philadelphia & Reading Railway in settlement of the claim of Miss Anna Fitzpatrick, who was hurt in the collision at Woodmont, Pa., last December. Sitting, with her sister, in the car next to the locomotive, her feet were crushed, and she sustained other injuries, while her sister was burned to death. The injuries to the feet kept Miss Fitzpatrick in the hospital 256 days and it is expected that she will have to have the attendance of physicians and nurses for a year longer.





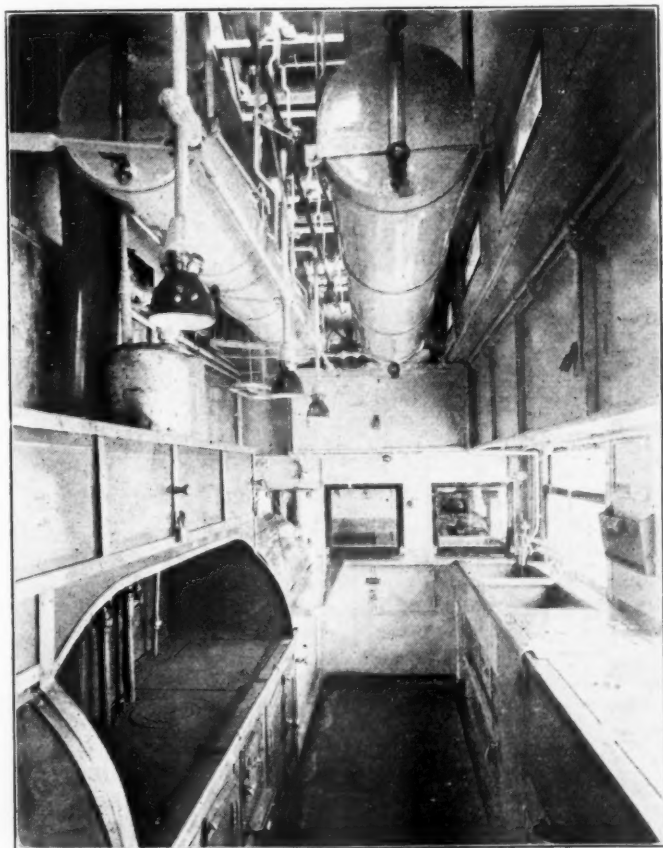
*Santa Fe Dining Car from the Kitchen Side*

## Steel Dinners for the Atchison, Topeka & Santa Fe

The Cars Are 86 ft. 6 in. Long Over End Sills and Weigh  
171,000 lb.—Tables Seat 36 Persons

THE ATCHISON, TOPEKA & SANTA FE has recently placed in service eight all-steel dining cars. These diners, which were built by the Pullman Company, are without vestibules, are 80 ft. 6 in. long over the end sills and have a weight of 171,000 lb. in working order. The din-

of which was built in 1914. The underframe is designed to carry the load and consists of fish-belly center sills built up of plates and angles, channel side sills, and bolsters and cross bearers built up of channel pressings and cover plates. One of the principal differences in the design of the present



*The Kitchen, Looking Toward the Pantry*



*Daylight View of the Dining Room*

ing rooms are 38 ft. 8 in. long and have six single and six double tables with a seating capacity of 36. The tables are spaced 6 ft. 5 in. from center to center, which is 2 in. greater than the spacing on the older diners of this road.

Essentially the design of these cars is the same as that of the other all-steel equipment of the Santa Fe, the first

cars is the use of structural channel sections for the side sills to replace the built-up sections employed in the first steel coaches. The body frame members are largely of pressed steel. The corner posts and side plates are of rolled Z-section; the balance of the side posts and cripples are of pressed Z-shapes. The belt rail is a continuous piece of

4-in. by 1½-in. rectangular section, with pressed Z-section window sills; the deck sill is a special angle pressing with a long horizontal flange; and the deck plate and carlines are channel pressings, the latter with closed ends. The sides of the cars are sheathed with ⅛-in. steel sheets.

The entire car body is insulated with a ½-in. layer of Insulite. This is applied on the car body between the posts and carlines against the outside sheathing and roof sheets. The underframe is covered throughout with a floor of No. 16 galvanized steel coated on both sides with Lucas car roof cement. The Insulite is then laid and covered with a heavy coat of petroleum asphalt, mopped on hot. On this are placed the transverse nailing strips for the floor. In the dining room the floor consists of a single thickness of ⅞-in. tongued and grooved yellow pine flooring. A double floor of the same material is laid in the kitchen while the single wood floor in the corridor is covered with Flexolith and surfaced with ¼-in. rubber tiling. The thickness of the nailing strips in the kitchen and corridor is reduced so that the surface of the floor is flush throughout all the several divisions of the car.

The interior finish of the dining room is of wood throughout and is built up of five-ply veneer Mexican mahogany. At all bearings, both on the sides and ceiling, the wood is backed with heavy canton flannel to prevent creaking. The steel interior finish in the kitchen, pantry and hallway is of 1/16-in. sheet steel, and is backed with one course of No. 12 fireproof duck, secured to the sheets with glue.

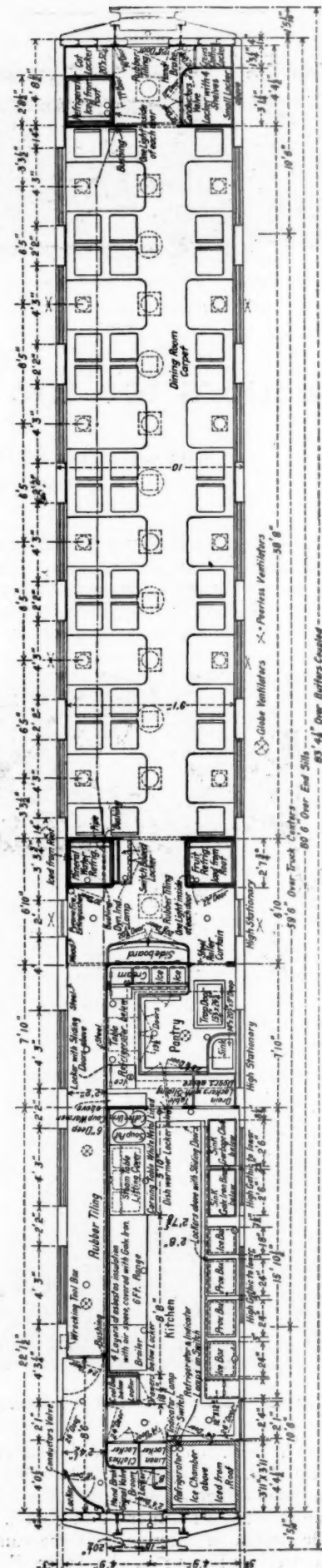
The arrangement of facilities in the car is clearly shown in the floor plan drawing. There are four refrigerators iced from the roof, the largest one located in the kitchen at the end of the car. Two of the others are located against the partitions at the kitchen end of the dining room, one on either side of the car, and the third at the opposite end of the dining room. In addition to the ice boxes in the kitchen and pantry, a large icebox for meat storage is located under the car to which access is had through a trap door in the pantry floor.

Side doors with 2-ft. 1-in. openings are located on either side of the car, 4 ft. 4½-in. back from the end. One of these doors opens directly into the kitchen, and the other into the corridor, with the door from the corridor into the kitchen directly opposite. The outside door on the kitchen side is in two sections arranged so that the upper section may be opened independently of the lower.

Power for the electric lights and fans is furnished by the U. S. L. axle light system, with truck suspended generator. The dining room is lighted by six center fixtures and six fixtures in the ceiling of the lower deck on each side. Safety fixtures are used throughout, those in the center being enclosed in 12-in. bowls, and those on the side in 8-in. bowls. Five ceiling fans of the revolving shutter type are placed between the ceiling lamps.

The Vapor Car Heating Company's thermostatically controlled vapor system is installed for heating the car, and three types of ventilators are used. The dining room is served by four Peerless ventilators opening through the deck sash, and two similar ventilators are also placed about the hall between the dining room and pantry. Globe ventilators are placed in the roof over the corridor and the pantry, two in the corridor and one in the pantry. Five adjustable hinged ventilator hatches, each arranged for operation in either direction are placed on the center line of the roof over the kitchen. These ventilators are directly over the range and steam table and provide a capacity for the movement of large volumes of air.

The cars are carried on six-wheel cast steel trucks with 5½-in. by 10-in. journals. They are fitted with Barber roller center plates and side bearings, and Simplex clasp brake rigging. The airbrake equipment is of the Westinghouse UC type.



Floor Plan of the Santa Fe Dining Cars



# Coal Priority Bill Passed by the House

## Will Control the Price of Coal at the Mines Through the Regulation of Coal Distribution

WASHINGTON, D. C.

**T**HE WINSLOW BILL to provide for federal regulation of coal distribution and an indirect control of the price of coal at the mines for the period following the strike settlements, during which there will be a general scramble for coal which would otherwise lead to a runaway market, was passed by the House on August 31 by a vote of 214 to 61 and the similar bill introduced by Senator Cummins was taken up in the Senate on September 1.

Under the House bill an attempt is to be made to prevent undue profiteering on the part of coal operators at least by authorizing the Interstate Commerce Commission "to issue such order or orders for priorities in car service, embargoes and other suitable measures in favor of or against any carrier or region, municipality, community, person, copartnership or corporation, and to take any other necessary and appropriate steps for priority in car service and in the equitable distribution of coal or other fuels so as best to meet the emergency, prevent extortion in prices charged for coal and other fuel, and promote the general welfare." The text of the Cummins bill was published in last week's issue.

### Does Not Actually Fix Prices

No one is authorized by the bill to actually fix prices; the federal fuel distributor is to report to the commission, among other information, the prices normally and usually charged for such coal and other fuel, and whether current prices, considering the costs of production and distribution, are just and reasonable." On the basis of the information furnished cars may be allowed to be supplied for the shipment of coal at what the commission on the recommendation of the fuel distributor thinks is a fair price, and cars may be withheld from, or an embargo may be laid against, shipment for which an unreasonable price has been charged, or even apparently for which an unreasonable price has been offered, the purpose being to prevent the running up of prices by those who would bid against others for the opportunity to stock up with coal as well as by those who would take advantage of the opportunity to demand high prices. The prevention of retail profiteering is left to the action of state authorities.

### Tired of Being Held Up

It might perhaps be inferred that the authors of the bill had possibly given some credence to the idea that coal strikes are not entirely one-sided affairs but that the desire to convert coal from a drug on the market to a highly prized and eagerly demanded luxury has something to do with them. In fact one of the reputed authors of the bill is understood to have unbosomed himself recently of the statement that he was getting tired after 30 or 40 years "of this business of scaring the American people to death and freezing them to death in the middle of August."

Almost frankly the bill uses the pretense of regulating interstate railroads in the use of their cars to accomplish a regulation of the price of fuel. But in case the commerce clause of the Constitution is not sufficient foundation for it, the preamble of the bill attempts to call into play the general welfare clause, the public health clause, the postoffice clause and the army and navy clauses. Congress is made to say that a national emergency exists, "which endangers the public health and general welfare of the people of the United States, injures industry and business generally throughout the United States, causes extortion, limits the supply of heat, light and power, threatens to obstruct and hamper the

operation of the government of the United States and of its several departments, the transportation of the mails, the operation and efficiency of the army and navy, and the operation of carriers engaged in commerce among the several states and with foreign countries."

Many of the opponents of the bill in Congress asserted that it would operate to restrict the production of coal rather than increase it by shutting off the mines whose cost of production is above the average and because operators might not want to ship coal, under a priority order, to a consignee who might be slow in paying for it. However, the advocates of the bill point out that as much more coal can be produced than the railroads can handle, the available transportation service should be conserved for those who can and will sell it at a reasonable price. If the wagon mines cannot operate profitably on the price which Mr. Spencer and the Interstate Commerce Commission consider fair, or if an operator thinks he would rather hold his coal in the ground than sell it for those prices, there will be that many more cars for the others.

### Hoover Favors Bill

Secretary Hoover, one of the chief sponsors of the bill, says that while high prices might under other conditions enhance production, the present problem is no longer one of production but of distribution. There will be much competition among producers, but the producer who has his coal in a car would have some degree of monopoly, at least he would have a monopoly of that car unless its use were regulated. It is understood that this time, having learned a lesson in 1920, the Interstate Commerce Commission does not propose to assign cars to people to use them in buying coal. It now proposes to see that the coal is bought by someone before the cars are assigned, and the prices will probably be based on those on which Secretary Hoover reached a voluntary agreement with a majority of the operators who were then producing coal.

Numerous amendments to the bill were offered but, with the exception of committee amendments, most of them were voted down or ruled out on points of order as not germane. One of the committee amendments was to insert in the preamble the words "and by reason of the disturbance in industrial conditions caused by the World War," as one of the justifications for the exercise of emergency authority. An amendment proposed by Representative Anderson to substitute a provision for the purchase of coal by a government agency was one of those held to be not germane. Representative Sanders' amendment, to strike out reference to prices was defeated 76 to 36.

Other unsuccessful amendments proposed to limit the period of the bill to six months or a year, to fix the salary of the fuel distributor at \$7,500, to provide that the Interstate Commerce Commission should exercise the powers granted without the aid of a fuel distributor, to provide that the price should be reasonable "to the ultimate consumer," to strike out the reference to "extortion" in the bill, and to reduce freight rates on coal by 50 per cent. Many of the amendments to tone down the effectiveness of the bill were offered by representatives from coal-producing districts, who warned those who voted for the bill that it would soon lead to the fixing of prices for commodities manufactured in other districts. One or two voices were raised to express disagreement with the idea of regulating prices downward in a period of scarcity without any provision for holding up



prices at time of dull market condition. An amendment offered by Representative Sanders was adopted providing that except as to prosecutions for offenses, the provisions of the act shall cease to be in force and effect January 1, 1924.

#### Borah and Cummins Bills in Senate

Discussion in the Senate of the Borah bill to create a coal investigating commission and of the Cummins bill to prevent profiteering by use of priority orders brought out much conflict of opinion. Senator Dial of South Carolina, who has a number of plants that use coal in large quantities, complained that he was unable to get coal which he had contracted for at \$1.90 a ton because the operators notified him that Mr. Hoover had raised the price to \$3.50 and that later the coal was diverted to other states under priority orders of the Interstate Commerce Commission. When Senator Kellogg reminded him that for a time only 4,000,000 tons of coal a week were being produced, and that public utilities and public institutions needed most of that, he said: "I think you might as well stop the public utilities as turn our labor out of employment and let them perish."

Senator Sutherland of West Virginia objected to regulation of the coal industry, saying that the entire trouble practically is one of transportation and that transportation is a "fine example of a government regulated industry."

Senator Kellogg replied that the roads had been in a position from April 1 to July 1 to handle the maximum of coal and they did not have it to handle, and that even if they were not crippled by the strike they could not transport all the coal in three months that should be produced and transported in six months.

Senator Reed of Missouri said the Interstate Commerce Commission was misusing its power in releasing 96,000 open top cars with sides less than 42 inches from its preferential coal order. He said the commission should exercise its power to divert the cars to the coal business instead of facilitating the handling of building materials.

#### Cummins Bill Under Discussion

The Borah bill was temporarily laid aside on Friday and the priority bill was taken up, the House bill being placed on the calendar without being referred to the committee on interstate commerce because it had already considered the similar Cummins bill. Senator Cummins moved that his bill be substituted for the House bill. In explanation of the bill he said that a majority of the members of the Interstate Commerce Commission felt that it was beyond their power to issue priority orders giving preference on account of the price of coal and that he would not be willing to give them that authority as a permanent matter. It should be limited to the emergency and even the President ought not to have the power to determine when the emergency exists. That, he thought, was for Congress to determine. However, he had no doubt that Congress, under its right to regulate commerce, if there was a starving community in one part of the country, could say that there shall be no cars loaded for any other purpose than to transport food, and that similarly it may say that only those operators who are willing to sell their coal to a community without coal at a fair price shall be allowed cars.

Senator Reed declared that this was merely a subterfuge to fix a price and that if Congress possesses such a power and starts to use it, "we may as well understand that we will have opened a door through which may come a lot of trouble. That power, of course, we can declare at any time, whether there is an emergency or not. There is nothing in the Constitution about emergencies."

Senator Underwood said that instead of attempting such legislation now the government should have taken action long ago to stop the railroad strike. Senator Underwood's objection that no legislation is now proposed to deal with

the railroad strike and his statement that the remedy lay in an anti-strike law, such as had been passed by the Senate at the time the Transportation Act was being framed, brought out an interesting statement from Senator Cummins that the Senate conferees at that time had not yielded on the anti-strike provisions until information had come to them that President Wilson would veto the bill if they were left in it.

"We put teeth in that bill," said Senator Underwood, "but when they carried it to conference they brought back an empty shell. The power to enforce the decree of a court is the only thing that makes the decree of value."

#### Wilson Threatened to Veto Anti-Strike Law

"For two months or more the Senate conferees attempted to maintain the Senate provisions in that respect," said Senator Cummins. "The House was adamant upon that subject, and although I am now betraying a secret which possibly is not generally known, it was not until the information came to the Senate conferees that if the bill was passed with the anti-strike provision in it, it would be vetoed, that the Senate conferees yielded to the House demands, and allowed the bill to pass without the provisions in it which I think are absolutely necessary to any effective railway regulation."

Senator Underwood replied that he did not criticize the chairman of the committee on interstate commerce, that he may have been compelled to yield in 1920, but that "when he surrendered he left the door wide open, and failed to put up the only barrier in front of a great transportation strike which can save the people of the United States from the dire conditions which are confronting them today."

Senator Cummins added that he had no direct word from President Wilson but that after the Senate had provided for a Labor Board of five members, all representing the public, and had made it unlawful to enter into a conspiracy or strike in order to coerce employers in disregard of the decision of the Labor Board, "gentlemen whom I shall not name but who were high in the councils of the labor people and of the Railroad Administration indicated to me that unless we yielded upon those points the President might find it difficult to sign the bill. It was at the very last minute that we changed the composition of the Labor Board, providing three members to represent the public, three to represent the railroads and three to represent the men."

Senator Cummins said he intends to introduce anti-strike bills at the next session of Congress, but that it would be impossible to control the present strike by any such legislation.

Senator Reed, who kept insisting that the bill would not accomplish the desired purpose and insisted that the important thing was to settle the railroad strike, ventured to "guess" that the freight engines and the cars necessary to transport the coal could be put in condition in two weeks time, although he thought Senator Cummins was understating it when he said that possibly 20 per cent of the engines and cars are in bad order.

In reply to objections because the bill does not reach dealers who may profiteer, Senator Cummins said it would reach the dealer who is shipping coal from one state to another just as completely as the operator will be reached, but that the remedy for retail profiteering is with the states.

Discussion of the Cummins bill was continued in the Senate on Tuesday and Wednesday. Senator Cummins in a long discussion pointed out that an important difference between the two bills was that this applied only to interstate shipments, while the House bill would cover also shipments within a state.

Senator Robinson made a long speech on Wednesday attacking the injunction obtained by Attorney General Daugherty.

# Canadian National Increases Facilities at Moncton\*

## New Engine Terminal Provided as Part of Plan for Extensive Improvement at That Place

By S. B. Wass,

Terminal Engineer, Canadian National Railways, Fort William, Ont.

THE CITY OF MONCTON is situated on the Canadian Government Railways at the junction of the main line from Halifax to Montreal and the line from the city of St. John, and is also the eastern terminus of the Transcontinental Railway, which makes it the gathering point for traffic from the west to Halifax, Sydney and all points east of it, as well as the breaking up point for traffic in the opposite direction. By reason of this fact it is the most important

of a wye connection, which resulted in a great deal of terminal detention. To eliminate this condition, and so simplify yard movements, a diversion was constructed from Mile 3.5 on the north main line to Mile 2.5 on the St. John sub-division, thence parallel to the St. John sub-division to the yard. By this means all traffic enters the yard from the west, making a simple east and west yard, except for the transfer to the Moncton shops, which traffic, being only local, is small.

A very complete ultimate layout has been designed, which includes east and west receiving yards, classification yards, which may be equipped with humps if required; east and west departure yards, transfer and storage tracks, new car repair facilities, new engine facilities, etc, so located that the construction of any additions or extensions required to meet traffic conditions may be carried on without materially interfering with traffic. This yard is arranged in units, so that it may be constructed and operated in sections as the traffic demands. The conception and design of this general layout originated with Collingwood B. Brown, recently chief engineer, Canadian Government Railways, and now engineering assistant to the vice-president, Canadian National Railways, Toronto. All of the expenditures and construction up to date have been in accordance with this ultimate layout.

### Construction Work

The actual work of construction was commenced in the season of 1919, and consisted of three parts:

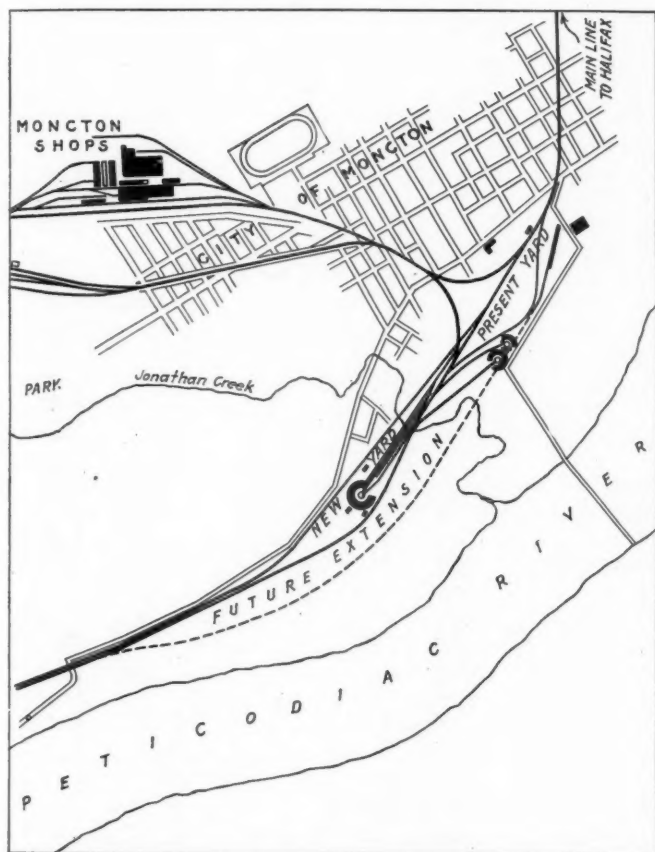
(1) The acquiring of additional land which was required on both sides of the present yard to provide for present and future requirements, and to avoid farm crossings.

(2) The construction of the diversion from the main line to the north, referred to above. The maximum grade used was 0.6 per cent, compensated for curvature, and involved the raising of the St. John sub-division to a height of 6.5 feet at the under crossing of the Salisbury road, Mile 1.8, and extension of this bridge from a single-track to a three-track structure. The contract for this work was awarded to the Dominion Construction Company, Ltd., and Wheaton, late in the season of 1919, and the work was completed early in 1920. A considerable saving in operating expenses was effected during the first winter by the use of this diversion for freight movement, although the old line was continued for passenger traffic use.

(3) The old freight shed was very inadequate for the local and transfer traffic. A new shed with additional trackage, arranged to conform with the new layout, was constructed. The structure is 400 ft. long by 40 ft. wide, of brick and structural steel construction. The contract for this work was awarded to engineers and contractors of St. John, and the work was completed early in the season of 1920. A transfer platform 500 ft. long was also constructed, conforming to the new layout.

### Construction Work During 1920

The engine house, coaling plant and other engine facilities are located on the high ground, where the foundation is good, just west of Johnathan creek, which crosses the yard at about Mile 0.6 and flows across the marsh, the level of which is approximately 25 ft. below the grade elevation.



Map of the Moncton Yard

railway junction point in the Maritime Provinces, and requires adequate facilities for handling traffic rapidly and efficiently, and also for distributing empty cars and equipment of all descriptions to points where needed. For a number of years the yard has been too small to provide the necessary working capacity; and the tracks too short to accommodate the long trains hauled by the new large locomotives. The roundhouse and other facilities, which were old, were too small and without proper facilities or making the running repairs to the present-day large locomotives.

### Layout of the Yard and Its Approaches

The old connection with the main line and trans-continental line, with the yard, is near the east end, and is by means

\* Abstracted from a paper presented at the meeting of the Engineering Institute of Canada at Winnipeg, Man., on September 7, 1922.



This marsh has an average width of about 400 ft., the Johnathan creek culvert being located at its extreme west side. The ground west of the culvert for a distance of 5,000 ft. was generally above grade ranging from zero to 15 ft., which necessitated considerable excavation. The material was required partly to widen the embankment at the extreme west end of the yard, but mostly to make the embankment over the Johnathan creek marsh.

An extension of the Johnathan creek culvert under the old yard was also necessary. In order to have the site ready for building during the season of 1921, the construction of the culvert extension and grading for the site of the building was performed in 1920, so far as it could be done. A contract for this work was awarded to the Dominion Construction Company, Ltd., and Wheaton, and the work was completed by the end of 1920, about 95,000 cu. yd. of material having been excavated.

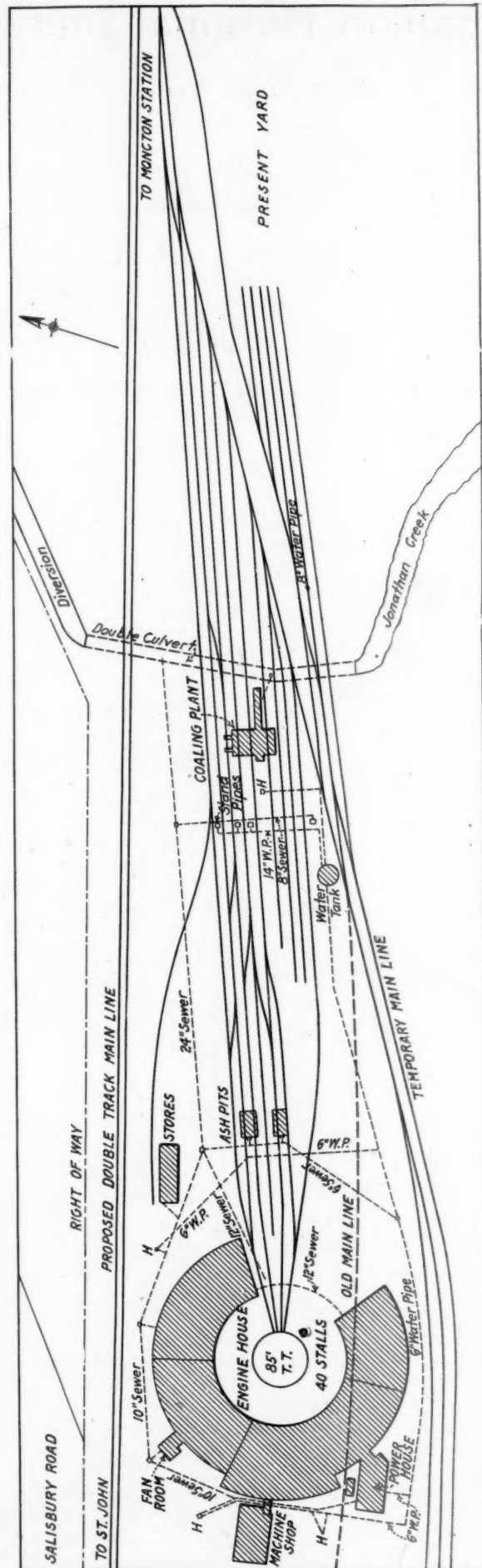
#### Work During 1921

The work during 1921 consisted of continuing the grading, diverting the main line, and construction of building and service tracks. It will be seen that a locomotive approaching the facilities will, under ordinary conditions, obtain the necessary attention in the following order: Coaling and sand, water, fire cleaning, housing. Three inbound and three outbound tracks have been provided, all of which are served by stand-pipes for water. Coaling facilities are provided on the three inbound tracks, and by means of cross-overs locomotives on two of the outbound tracks may be coaled with very little interference with the inbound locomotives. Four tracks have been provided with ash-pits and sufficient cross-overs have been provided to facilitate any desired movement of the locomotives. Fifty tracks to the turntable have been provided for; four are running tracks to and from the turntable, forty are entrances from the turntable to the forty-stall house, which is now constructed, and space for an additional six-stall section when required. All buildings except the water tank and coaling plant are constructed of brick on concrete foundations with mill type frames of fir, except the machine shop, which has a structural steel frame. This is one of the largest layouts for a single engine house in Canada.

As much of this work had to be performed in the present yard, without interference with traffic, it was decided to do it by the railway's own forces under the supervision of A. F. Stewart, chief engineer, with S. B. Wass, construction engineer, and E. R. Evans and H. L. Curie, assistant engineers, directly in charge of the work.

#### Sewer System

As the buildings were all located on the natural ground, composed of hard pan, very impervious to water, it was important that drainage be provided for the foundation excavations at the earliest possible moment, and the most effective method was to get the permanent sewerage system installed. The main sewer, extending from the outlet to the manhole opposite the ash-pits, is of 24-in. double strength, vitrified clay pipe 798 ft. long, placed 14 ft. below grade so as to drain the ash-pits. From this main sewer, branches of smaller sized pipe are carried to the turntable pit, engine wheel drop pits, and all other facilities requiring drainage. The total amount of excavation for sewer trenches was 4,960 cu. yd. in hard-pan material merging into rock, so that hand labor was considered to be too slow. Several alternative methods were discussed and it was finally decided to try a Marion railroad ditcher which was available. This machine was supported over the top of the trench on old bridge stringers and in one operation excavated the trench in front of it and deposited the material behind itself, the pipe having been laid and jointed by men working directly underneath the machine.



The New Engine Terminal



So successful was this method that frequently 55 lin. ft. of completed sewer was laid in a working day, and an average of 32 ft. per day was maintained during the whole operation.

### The Terminal Buildings

The engine house contains 40 stalls, 33 of which are 100 ft. in length with 65-ft. pits, and seven are 120 ft. long with 80-ft. pits. The house is divided into two sections of seven 100-ft. stalls; one section of seven 120-ft. stalls; one section of nine 100-ft. stalls, and one section of 10 100-ft. stalls. Three of the long stalls are provided with drop pits for driving wheels, and two with drop pits for tender wheels, so located that any pair of wheels on any of the railway's existing locomotives may be changed. The drop pits are all equipped with Taylor-Arnold pneumatic jacks. Each stall is provided with steam blower, with Barco connection, blow-off pipe, wash-out and boiler filling pipe, cold water connection and compressed air, all of which systems are connected with the power house, where the various pumps, hot-well, etc., are located.

The machine shop, 84 ft. long by 53 ft. wide, is located at the back of the long stall section of the roundhouse and connected to it by a passage way. It is provided with machines for light repairs, tool room and forge, with jib cranes for handling heavy parts, and a narrow-gage push-car track between the machine shop and the roundhouse stalls.

The stores and office building is 100 ft. long by 30 ft. wide. The foreman's office is in the west end of the building, and adjoining it are the booking and registering room, locker room, wash room, shower bath, etc. The oil cellar, fully equipped with storage tanks, and 10 self-measuring and registering oil pumps, is in the central portion of the building. The east end of the building, to be used for miscellaneous supplies, is fitted with racks and shelves, and surrounded with an eight-foot platform with ramps. This building is heated by low-pressure steam, supplied by the power house boilers.

The power house is attached to the back of the twelfth stall of the engine house and is 87 ft. by 44 ft. It is divided into two parts by a brick wall, the back part of which contains two 250-h.p. Babcock and Wilcox water-tube boilers, which were in use in the old power house, but have been retubed, thoroughly cleaned and repaired. The other part contains the air compressor, feed-water, wash-out and vacuum pumps, and steam-driven fan and heater coils. A hot-well is located just outside the power house for storage of hot water. This hot water is used for feedwater for refilling locomotive boilers, thus effecting a great saving in fuel.

The electric current is obtained from the railway power plant at the Moncton shops. It is used for operating the coaling plant and motors in the machine shop, in addition to a complete lighting system throughout. The lights in the engine house are so arranged with reflectors on the posts that an abundance of light may be obtained for work on any part of the locomotive, but economy may be effected by turning off those not required, as each stall is supplied with separate switches.

A mechanical coaling plant of 350-ton storage capacity, equipped to elevate coal at the rate of 50 tons per hour, was installed. It is provided with three coaling tracks, and one hopper track for receiving coal. It is operated by electric power from the railway system. The machinery was supplied and installed by Williams & Wilson, Ltd., of Montreal, under contract, but the construction of the building and all other work was done by the railway forces. Facilities are also provided for sand storage and supplying sand to locomotives at this plant.

Water is obtained from the city water supply and a steel tank of 150,000-gallon capacity is provided as a storage

reservoir. Four 10-in. standpipes are provided for watering locomotives. The steel water tank was supplied and erected by the Dominion Bridge Company on a concrete foundation constructed by the railway forces.

Two double-track ash-pits, 40 ft. long, were provided. These pits are 12 ft. deep and so arranged that they may be operated as dry or flooded pits. They are constructed of reinforced concrete walls, lined with fire brick, with the sloping wall of steel rails under the tracks. The space between the two tracks, over the deep part of the pit, is covered with a wooden platform which is removed when the cinders are being taken out of the pits. The ashes are removed from the pits by a coaling crane with a clam-shell bucket. This crane is also used to load coal from storage piles or to coal locomotives in case the plant breaks down.

### Construction

As all the buildings were required for operation at the same time, it was decided to carry on the construction of them simultaneously and thus prevent the work from becoming congested. For purposes of organizing a construction force, a fairly close estimate of the quantity of each class of work to be performed was made and from it an approximate estimate of the number of men and time required to perform each was obtained. By keeping in view the natural sequence of the work, a program was worked out by which the foundation work was kept well ahead of the concrete work, the concrete work ahead of the brick work, the brick work ahead of the carpentry, painting, piping, etc., and throughout the whole work there was very little interference of one class of work with another, so that a gang once organized to perform certain classes of work was kept up to full strength until the work was practically finished.

Bills of material were also prepared, orders were placed for these as early as possible and arrangements made for delivery in accordance with the general program of the work. By keeping daily records of material on hand, and by keeping the persons supplying the material daily advised of the material situation at the work, no serious delay was caused for material, although in some cases the men had to be shifted to another part of the work for a few days. This was true in the case of the steel window lintels, reinforcing for the concrete floor in stores building, pipe fittings and electrical supplies. Notwithstanding this, the general program of the work was very closely adhered to.

During the season 7.03 miles of permanent track with 43 switches were laid. This work could not be done continuously, but the layout was located on the ground, and wherever possible service tracks were laid in the position of permanent ones. A large amount of old track had to be taken up and shifted, and the locomotive crane was very useful in handling this material.

### Transferring from Old to New Facilities

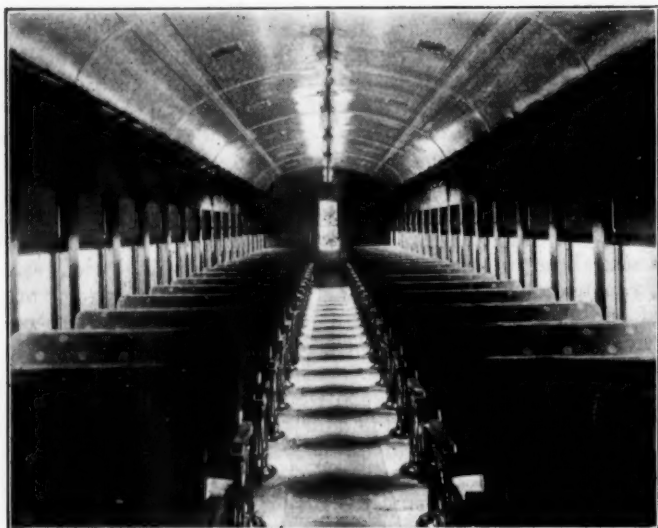
It was necessary to continue operation at the old facilities until the new ones could be used. About one-half of the machines in the old shop were belt driven, and these were installed in the new shop, while the motor-driven machines were left in the old shop until after the transfer had been made.

The transfer of the turntable naturally was the governing feature, and this was accomplished without any interference with traffic. The table was put out of service at the old house at 8 a. m. December 17, and was raised out of the pit without removing deck or rails, by a 75-ton wrecking crane, by a rather unique method. The crane lifted one end of the table, blocking was placed under the center, the table was then tilted over the blocking and the opposite end blocked up. By repeating this several times, the table was raised high enough to permit car trucks with especially constructed bolsters to be pushed under the table. By this

means the table was transferred to the new site by 4 p. m., where it remained till the following morning. During the night the crane was taken away on other service, and it returned at 11 a. m. By reversing the tilting process the table was lowered into the new pit, and at 4.30 p.m. December 18 the first engine went into the new house.

## Steel Suburban Passenger Cars for the Philadelphia & Reading

THE PHILADELPHIA & READING is now receiving deliveries on the lot of 45 all-steel passenger and five all-steel combination passenger and baggage cars for suburban service which were ordered in February from the Harlan plant, Wilmington, Del., of the Bethlehem Shipbuild-



Interior of Suburban Coach

ing Corporation, Ltd. With the placing in operation of these cars, the Reading is now using specially designed all-steel equipment for suburban traffic, a departure from the practice of using the older types of equipment in suburban service or on branch lines.

These suburban-type cars are designed for the same

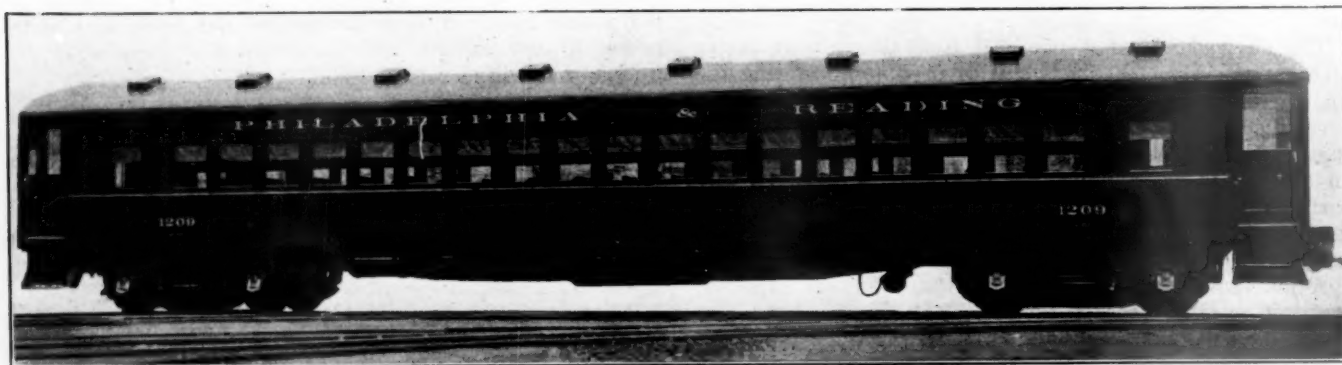
with 16 ventilators placed on top. This construction makes possible an unusually light and airy car.

There is but one saloon in each car, thus increasing the space for seats to a maximum providing a seating capacity of 48, six more than the Philadelphia & Reading standard main line coaches of the same length. The omission of the second saloon also has the advantage of widening out the aisle at the door, permitting quick emptying of the car. The saloon bulkheads are steel.

The coaches are of the wide vestibule type and are 63 ft. in length over the underframes. They are electrically lighted with Safety Car Heating & Lighting Company's body suspension equipment, and are heated by means of the thermo-jet system. The seats are Hale & Kilburn Walk-over design upholstered in Philadelphia & Reading standard plush. Four-wheel type trucks with 36-in. wrought steel wheels and clasp brakes are used, and the axles have 5½-in. by 10½-in. journals. Gould couplers, buffers and draft gear and Westinghouse air brakes are part of the equipment.

The interior finish of the coaches is painted mahogany color. The ceilings are finished in old ivory and striped to harmonize with the interior of the car. The sides, ends and roof are insulated with three-ply salamander, and the headlining is agasote.

APPEALS WITH NO HEART IN THEM.—J. O. Hackenberg, superintendent of the Pennsylvania Railroad at Buffalo, N. Y., speaking recently at a Sunday meeting of employees said, in part: Far too many railroad men today know the superintendent only as initials on a train order or a name on a discipline notice, and if I can convince you that he is a human being, with the same weaknesses, troubles and cares that each of you have, my visit to you will have been worth while. . . . I know and you know that I know, there have been cases where men have been fairly disciplined, getting what they justly deserved, where your chairmen have been instructed to appeal. No right thinking chairman can have his heart in such an appeal and many times it is lost simply because it was wrong. If you men would get behind the discipline and give it your full moral support, I am safe in saying that most of the need for discipline would disappear. Think this over, and the next time John Doe is disciplined and asks your support in having the discipline annulled, ask yourself the question, "Was John actually guilty?" and if he was, how many men did John take a chance of wrecking when he broke the rules? When a superintendent disciplines a man, it isn't because he enjoys it, but to try to keep a railroad safe. The man who deliberately



New All-Steel Suburban Coach for the Philadelphia & Reading

strength as main line cars and are of standard all-steel construction throughout. New main line all-steel cars for this road were described in the *Railway Age* of July 15, 1922, page 117. A noticeable feature, however, is the construction of the roof, which is of the single deck type,

takes a chance with his own life and limbs certainly will, with less hesitancy, take a chance with yours. When you sit on an engine and see a man take a foolish and needless chance, without going after him about it, you are simply adding to your own risk.



# Safety Council Holds Annual Meeting in Detroit

## Results of Careful Crossing Campaign and Safety Education of Children Chief Topics Discussed

THE ELEVENTH annual congress of the National Safety Council, which was held in Detroit, Mich., August 28 to September 1, extended well-merited recognition to its Steam Railroad section by the election of Marcus A. Dow, general safety agent, New York Central Lines, to the presidency of the Council. The Railroad section, which is one of 21 industrial branches of the congress, devoted the major portion of its deliberations to a discussion of the highway crossing hazard, which has been given special attention in the "Careful Crossing Campaign" instituted on June 1. In the absence of Isaiah Hale (A. T. & S. F.), chairman, A. O. Ridgway (D. & R. G. W.), vice-chairman, presided at the sessions of the Section which was attended by about 80 railroad safety officers representing 27 steam roads.

The chairman, in his annual report, cited as strong evidence that the safety first movement is effective in reducing train service accidents, the fact that the Brotherhood of Railroad Trainmen has been able to increase the brotherhood life insurance from \$2,000 to \$2,700 without increasing the cost to the insured. Mr. Hale's report supported this statement by figures taken from the Interstate Commerce Commission Accident reports for the last six years.

Fred Meyers, terminal superintendent of the Wabash, Detroit, in a paper on "Accident Prevention from the Standpoint of the Operating Department," cited a number of operating rules which, properly enforced, would put a real "kick" in the safety requirements. He suggested that in some cases there had been too much "safety organization" and not enough individual effort to place each man on his own responsibility. He has also found the committee men of the brotherhoods to be of great assistance in convincing the men that this safety movement was all for their personal welfare; they aid in eliminating long established dangerous habits. In a discussion of this paper, T. A. Carroll (Penn.) explained that as a means of getting home to each man, different divisions of that road had issued small bulletins entitled "Fusee," "Life Preserver," etc., covering the details of accidents and methods of preventing them. Bulletins detailing actual incidents on the home road seem to receive more attention than abstract statements.

W. F. Braden (B. & O.), presented a paper on the "Relative Importance of Supervision and Propaganda in Railroad Safety Work," in which he selected the Careful Crossing Campaign as the most striking example of successful propaganda launched recently by the railroads. He pointed out that in railroad safety work the psychology behind propaganda was, that a knowledge of danger was most readily impressed on the average railroad employee through the sense of sight; that is, by means of bulletins. The visual impression is strengthened by three qualities, exaggeration, motion and unusual conditions shown in the picture. In 100 tests the eye was found to make only 18 mistakes, whereas the ear made 34. The conclusion was that the average shop foreman, in his haste to turn out work, can not with his ordinary limited vocabulary hope to accomplish as much for the safety of the men by continued talks, as is possible by the use of the "universal language"—pictures and bulletins.

### Progress Report on Careful Crossing Campaign

According to reports from 66 of the Class I roads 352 people were killed at highway grade crossings on these roads during June and July, 1922, an increase of 35 over the number for the same months in 1921. These figures were pre-

sented by H. A. Rowe, claim attorney of the Delaware, Lackawanna & Western, who is credited with originating the famous "Cross Crossings Cautiously" poster. Continuing, he stated that several roads had reported a reduction in such accidents, among which were: the Chicago & North Western, having 4 less deaths and 12 less injured in June and July, 1922, than the same period for 1921; the Baltimore & Ohio with 10 less killed and 9 less injured; the New York Central 1 less killed and 28 less injured; the Central of New Jersey, 13 less killed and 23 less injured.

Mr. Rowe also reported the results of a check on 300 average crossings made July 15 and 16, this year. Of 306,306 automobiles observed the drivers of only 156,607, or about 50 per cent, looked either way, and only 26,453, or about 9 per cent slowed down to less than 20 miles an hour. The speaker stated that 1,300,000 standard "Cross Crossings Cautiously" posters had been used in the campaign and that in this period an equal number of (new) automobiles had been sold. In the face of such odds Mr. Rowe felt that the fact that deaths and injuries have been restricted to even approximately the 1921 record was a great credit to the campaign. The death of 1,800 persons and injury to 5,000 annually for the past five years in railroad crossing accidents has begun to bring the nation to realize that instruments of death and torture are being promiscuously placed in the hands of incompetent persons, exposing innocent passengers on trains and in automobiles to the mercy of ignorant, heedless and criminally reckless drivers. Mr. Rowe advocated a united movement for the inauguration of legislation to establish a "standard of ability" to be required of automobile drivers. The speaker advocated a movement to influence local newspaper writers not to make a hero of the automobile driver involved in an accident but to place the blame where it belongs, thereby convincing the public that any driver not observing caution is a fool, not a hero.

T. A. Carroll (Penn.) in discussing this paper said that there had been a gratifying degree of publicity. In 151 newspapers in the larger cities he had found 969 column-inches of copy on the careful crossing campaign and, including editorials and copied articles in smaller papers some two miles of copy had been produced on the subject. Considering that there is a combined circulation of some 89,000,000 copies of these papers it is fair to conclude that the American people have had this subject brought effectually to their attention. The slogan has been used in several cartoons published in prominent newspapers. This slogan is a real asset; it will stick as long as railroads cross highways. But the campaign is now only well started and requires the best efforts of all to keep it properly before the public. He closed by saying that the campaign has cost \$50,000, a small amount compared to the good accomplished.

### Safety Education Through the Public Schools

Marcus A. Dow (N. Y. C.) stated that just after the campaign had been started there was an increase in crossing accidents on the New York Central for two weeks and that no favorable results were noted until the first two weeks in July, but a reduction would be shown for the first half of August. The 10,000 local station agents on the New York Central have presented the standard N. Y. C. careful crossing speech to over 2,000,000 people. Mr. Dow urged the railroads to continue the campaign without abatement.

The work of planting safety habits into the lives of school

children was explained in detail by several speakers. L. G. Bentley (C. & O.) said that school children in the territory adjacent to the Chesapeake & Ohio were being taught to keep off the railroad right-of-way and cars. Personal work of safety agents among the children by the telling of interesting and vivid stories in the school rooms has accomplished gratifying results. Mr. Bentley has personally delivered his story of "Bill Day, the Boy Athlete" to 50,000 school children, and he received promises from these children to keep off the railroad. J. T. Broderick (B. & O.) stated that a three-year campaign in the homes and schools along the Baltimore & Ohio has resulted in a reduction of 20 per cent in persons killed and 34 per cent in injured. How children are taught to keep off railroad tracks in Detroit was explained by Miss Harriet E. Beard, supervisor of safety, Detroit Public Schools. A short one-act play enacted by the children demonstrated methods of arousing interest in safety and of impressing the children with the serious consequences of trespassing on railways.

A systematic and efficient periodical examination of the eyes of all workmen was advocated by R. M. Little of the National Eyesight Conservation Conference. He claimed that over half of the employees of the average industrial plant have defective vision and as a result are nervous, restless and careless, this condition is a constant source of hazard. It can be remedied by glasses properly fitted.

he will resent the warning. On the other hand, the straight-from-the-shoulder request (or order), appeals to him and he will promptly obey, in the majority of cases. In closing Mr. Love emphasized the importance of co-ordination—let the eye follow the hand. Many men are prone to trust their hands in one direction while looking in another. Men should be trained to watch where they put their hands.

L. G. Bentley, general safety agent, Chesapeake & Ohio was elected chairman of the Steam Railroad section of the National Safety Council for the ensuing year. John Fitzhugh (G. C. & S. F.), vice-chairman and L. P. Green (M. St. P. & S. S. M.), Minneapolis, Minn., secretary.

## Freight Car Loading

WASHINGTON, D. C.

**F**REIGHT CAR loading during the week of August 26 was the largest since October 21, 1921, amounting to 890,838, as compared with 828,883 in the corresponding week of 1921 and 1,001,308 in 1920. This was an increase of 34,679 cars over the previous week and of about 23,000 as compared with the highest previous week this year before the shop strike. The increase was mainly due to the increase in coal loading, following the Cleveland agreement, which amounted to about 30,000 cars more than during the

### REVENUE FREIGHT LOADED

SUMMARY—ALL DISTRICTS, COMPARISON OF TOTALS THIS YEAR, LAST YEAR, TWO YEARS AGO, WEEK ENDING SATURDAY, AUGUST 26, 1922

Districts	Year	Grain and grain products	Live stock	Coal	Coke	Forest products	Ore	Mdse. L.C.L.	Miscellaneous	Total revenue freight loaded		
										This year 1922	Corresponding year 1921	Corresponding year 1920
Eastern	1922	9,707	3,145	20,134	1,235	5,742	6,195	66,522	97,829	210,509	.....	.....
	1921	8,028	3,102	44,704	1,108	4,576	2,127	60,227	80,251	.....	204,123	244,935
Allegheny	1922	3,550	2,957	32,761	4,570	3,219	11,496	48,296	78,616	185,375	.....	.....
	1921	3,216	2,812	44,581	2,265	2,647	7,235	45,775	57,158	.....	165,690	212,335
Pocahontas	1922	200	214	20,547	263	1,109	87	4,604	2,580	29,604	.....	.....
	1921	173	198	16,846	98	1,227	.....	4,768	3,898	.....	27,218	36,322
Southern	1922	3,899	2,320	20,495	711	19,030	993	34,941	33,894	116,283	.....	.....
	1921	3,537	1,842	21,392	288	14,180	193	36,428	31,547	.....	109,407	129,425
Northwestern	1922	17,305	7,772	4,195	1,045	15,768	44,014	28,573	38,088	156,760	.....	.....
	1921	18,797	6,307	8,527	484	11,334	21,268	28,084	35,053	.....	129,854	170,486
Central Western	1922	15,160	12,555	9,183	396	7,705	1,999	32,175	52,970	132,143	.....	.....
	1921	19,161	9,895	18,507	190	6,294	879	31,189	42,103	.....	128,178	139,124
Southwestern	1922	4,741	3,083	3,715	170	7,893	347	14,889	25,526	60,164	.....	.....
	1921	5,926	2,763	4,956	197	7,140	250	15,984	27,197	.....	64,413	68,681
Total western districts	1922	37,206	23,410	17,093	1,611	31,366	46,360	75,637	116,384	349,067	.....	.....
	1921	43,884	18,965	31,996	871	24,768	22,357	75,257	104,353	.....	322,445	378,291
Total, all roads	1922	54,562	32,046	111,030	8,390	60,466	65,041	230,000	329,303	890,838	.....	.....
	1921	58,838	26,919	159,513	4,631	47,408	31,912	222,455	277,207	.....	828,883	.....
	1920	46,044	28,463	211,766	15,921	66,580	79,709	207,202	345,623	.....	.....	1,001,308
Increase compared	1921	.....	5,127	.....	3,759	.....	33,129	7,545	52,096	61,955	.....	.....
Decrease compared	1921	4,276	.....	48,483	.....	.....	.....	.....	.....	.....	.....	.....
Increase compared	1920	8,518	3,583	.....	.....	.....	.....	22,798	.....	.....	.....	.....
Decrease compared	1920	.....	.....	100,736	7,531	6,114	14,668	.....	16,320	110,470	.....	.....
August 26	1922	54,562	32,046	111,030	8,390	60,466	65,041	230,000	329,303	890,838	828,883	1,001,308
August 19	1922	55,893	29,756	81,959	8,201	57,934	67,201	229,925	325,350	856,219	815,147	968,103
August 12	1922	57,567	28,370	84,559	8,420	56,163	69,197	230,652	317,652	852,580	808,269	971,269
August 5	1922	58,512	26,507	79,246	8,442	55,898	66,218	229,287	327,241	851,351	786,178	935,730
July 29	1922	59,170	27,104	76,374	9,112	58,197	64,147	234,567	331,062	859,733	795,432	936,366

One of the interesting papers presented was "Simplicity in Accident Prevention Work," by A. B. Love (A. C. L.). Mr. Love explained that although the use of safety devices is good, the ultimate goal is to bring "the workman to a full realization of his personal needs and to the grave responsibility he assumes for his dependents, as well as the influence he wields over fellow-workers." Mr. Love called for better signs and posters. Placards displayed in shops or other places frequented by workmen should be brief, simple and clear, otherwise "they become so much wall decoration—nothing more." Instead of putting up a sign reading "The Best Safety Device Known is a Careful Man" substitute one like "Watch for Overhead Obstruction Here"; or "Keep Aisles Clear"; or "Do Not Leave Tools Where They May Fall Upon Some One." The first-mentioned sign creates in a man's mind the idea that if he suffers injury he will not be considered careful, and will not be given credit for certain qualities which are attributable only to careful men. Thus

preceding week. The loading of grain and grain products and ore was slightly less than the preceding week, but all other classes of commodities showed increases.

**THE DAY'S WORK ON THE NEW YORK CENTRAL.**—This is the title of a display advertisement recently published by the New York Central reading as follows: From midnight to midnight the New York Central Lines haul 100,000,000 ton-miles of freight. A ton-mile, the measure of transportation, is one ton moved one mile. A hundred million ton-miles are equivalent to moving a ton a distance greater than from the earth to the sun; or of moving 4,000 tons [a train of 80 large cars] around the world. In the same twenty-four hours the passenger trains record 10,000,000 passenger-miles, the equivalent of carrying more than 10,000 passengers from Chicago to New York. The day's work of the New York Central Lines is about one-tenth of the rail transportation of the United States, and is greater than that of all the railroads of England and France combined.



# U. S. Gets Blanket Injunction Against Shopmen

Restraining Order Covers Many Strike Activities—A. F. of L.  
Threatens to Fight Enforcement

ONE OF THE MOST important moves in the shopmen's strike and probably the most far reaching and significant action ever taken in an industrial conflict by the United States government came out of a clear sky when Harry M. Daugherty, attorney general, appeared on Friday before Judge James H. Wilkerson of the Federal district court at Chicago, asking for and receiving a temporary injunction restraining all striking railroad employees over the

except "where the public generally are invited to come to transact business."

Doing any injury or bodily harm to any employee of a railroad.

Judge Wilkinson set September 11 as the date on which hearings will be held on the plea of the government for a permanent injunction.

## The Government's Case

In presenting the government's case to the court Attorney-General Daugherty outlined the reasons underlying the government's application for an injunction in part as follows: The equipment of the railroad companies is so materially affected by acts of vandalism and inattention that the service of the companies is generally seriously impaired, and, in some instances, the railroads have abandoned the running of trains altogether.

"The railroad labor board is an agency of the government of the United States. In this particular contest, both parties



From the World, N. Y.

A Common Target

country from interfering in any way with the operation of trains. The injunction names all of the officers of the Federated Shop Crafts and their system organizations, 250 men in all, and briefly restrains these leaders from:

Issuing any instruction or public statement to members of their organizations to induce them to do or say anything to cause any railway employee to leave his work or to cause any person to abstain from entering employment of a railroad.

Using funds of unions in furtherance of any act forbidden in injunction.

All officers and members of unions or their agents are restrained from:

Engaging in picketing.

In any manner, by letters, circulars, telegrams, telephone messages, by word of mouth or by interviews, encouraging any person to leave the employ of a railroad or to refrain from entering such employ.

Interfering with or obstructing any railway.

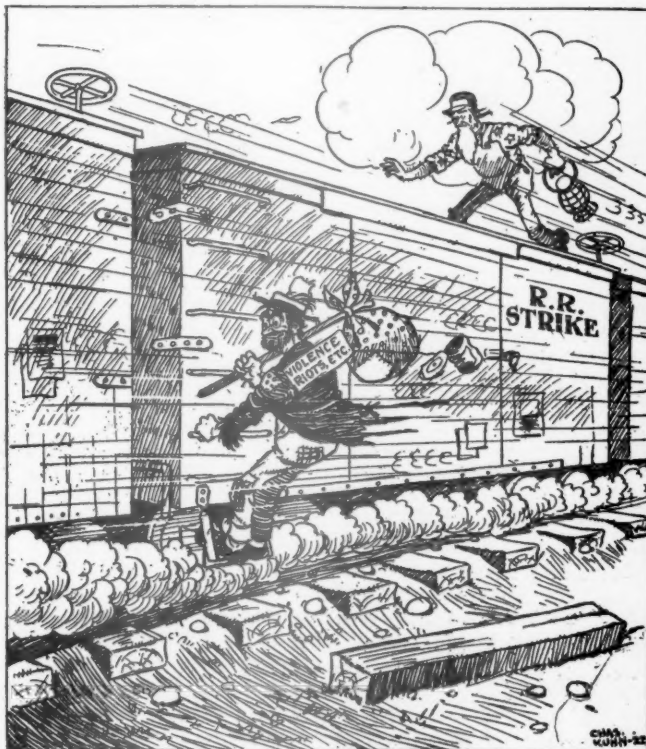
Hindering inspection, repair or equipment of locomotives or cars.

Conspiring or agreeing to hinder railroads in the transportation of passengers, property and mails.

Interfering with employees going to or returning from work, "by displays of force or numbers, threats, intimidations, acts of violence, opprobrious epithets, jeers, taunts or entreaties."

Loitering at or near places of ingress and egress for employees.

Trespassing on the premises of any railroad, or any other place



From the Indianapolis News

Hookin' a Ride

submitted the differences in dispute to the regularly constituted governmental authority to hear disputes and render decisions thereon. The railroads were willing to comply with the decision which was the cause of the strike, but the defendants not only repudiated the decision but repudiated the labor board and its authority, and holds the labor board and the government of the United States in contempt."

Authority in the laws of the country to uphold the granting of the injunction are "ample" Attorney-General Daugherty said, citing the ruling of Judge Brewer in the Debs case as a precedent.

"I do not appear here as a representative of the railroads; I appear here by virtue of law requiring me to do so, representing

the government of the United States and the people of the United States. The government of the United States will never lift its hand against or touch a torch to the welfare of labor in its legitimate pursuit or to deny it what it is entitled to. The United States could not have been developed but for labor. Without that which labor produces the people of the United States cannot be prosperous, and, in fact, they cannot live.

Tomorrow it will be said by some persons that this proceeding is intended as a death blow to the unions. In my judgment, this movement is necessary for the protection and the preservation of the unions themselves.

### Government Not Opposed to Labor Unions

The government of the United States is not opposed to labor unions if they perform such functions as can be performed in lawful America. Never, while the labor unions limit their activities to legitimate acts and lawful pursuits not injurious to society, at least while I speak, and to the extent that I can speak, for the government of the United States, shall a blow be struck at them. But it may be understood that, so long, and to the extent, that I can speak for the government of the United States, I will use the power of the government of the United States within my control to prevent the labor unions of the country from destroying the open shop. When a man in this country is not permitted to engage in lawful toil, whether he belongs to a union or not, with full protection and without interruption, the death knell to liberty will be sounded and anarchy will supersede organized government.

There are many who believe, on account of the arrogance of certain officials of labor unions, that the unions themselves should be destroyed. I do not think they should, but I think they should be corrected and restrained. If the acts of violence and murder are inspired by the unions, then it is time for the government to call a halt. No organization or association, no matter how well organized or how powerful it may be, can hold its constitution or its laws supreme over the government, the constitution and the laws of the United States of America.

No union, or combination of unions, can, under our laws, dictate to the American union. When the unions claim the right to dictate to the government and to dominate the American people and deprive the American people of the necessities of life, then the government will destroy the unions, for the government of the United States is supreme and must endure.

The right to work in this country is as sacred as the right not to be compelled to work, if a man is not disposed to do so, and every man must be made equally secure in his choice. I take notice of the fact that, in the legislative branch of the government, the situation is deemed so serious that the taking over of the railroads by the government is considered necessary.

I do not believe that time has yet come. The government has not reached the point where it will admit its inability to protect the rightful owners of property in their right to use that property for the general welfare of the whole people, and to require the owners of the railroads to furnish that service which is essential to the life of commerce, to the life of industry, to human life, and even to the very life of the government itself.

These defendants, considering the temperament of the people of the United States, can do no wiser or more beneficial thing for union labor than to consent that this temporary restraining order, if it should be granted by the court, be made permanent.

### Service Should Not Be Interrupted

I am not in this capacity before this honorable court pleading any cause of the railroads as their advocate, except as may be necessary to the welfare of the American people. The railroads are built under pledge to operate their lines. Representing the American people in this proceeding, I demand that the operation of the railroads shall not be interrupted in the service the government requires them to perform.

The dispute between the employers and employees is not involved in this proceeding. We have passed beyond that point. A governmental body entitled to recognition and obedience has decided that dispute. I am not taking sides between the disputants at this time as an advocate of either.

## The Attitude of the Government

The sweeping injunction obtained by Attorney-General Daugherty at Chicago on September 1 is in accordance with President Harding's repeated declaration of his purpose to enforce the laws to maintain transportation service. The President feels that the action was entirely justified by the situation and it has been announced at the

It so happens in this instance that the railroads are willing to render the service the government requires they shall render. They are trying to serve the American people. They are trying to observe the law. They are endeavoring to furnish transportation. On the other hand, the defendants are preventing transportation and are offending against the law, as alleged in this bill, and by acts of violence are antagonizing and opposing the government of the United States.

But even though this widespread violence, this destruction of property, this threatening of starvation, and the hazarding and taking of human life as set forth in the complaint and situation were not present, no organization, no matter what its purpose or how powerful its plans and pursuits, can interfere with government and interstate commerce.

The underlying principle involved in this situation and this action is the survival and the supremacy of the government of the United States.

### Has Received Requests for 40,000 Deputy Marshals

Adding to his prepared statement the attorney general told the court that because of lawlessness and violence against railroad property and railroad workers, his department had received urgent requests for no less than 40,000 deputy marshals to keep down the strike disorder. Already 5,500 marshals have been assigned, and in addition, special service men of the department have taken up similar work throughout the country, the attorney general said. The cost of such special service, he said, already expended was more than \$1,000,000 for the first eight weeks' duration of the strike.

In California alone, Mr. Daugherty said, more than \$75,000,000 worth of fruit and produce already had been destroyed because of the failure of transportation systems to move the crops. In Somerset, Ky., he said 25,000 cars of bituminous coal were congested in the railroad yards. Vandals had tampered with more than 5,000 cars there, he said, and as a result the nation was faced with suffering for want of coal. Fifty per cent of the engines of the nation's railroads have been rendered useless by lawless activities since the strike began, he said, and 1,000 mail trains canceled.

### Jewell Issues Statement

As soon as news of the injunction granted Attorney General Daugherty reached him, B. M. Jewell, head of the Federated Shops Crafts, went into conference with his attorney, and later issued the following statement:

Enforcement of the injunction obtained by the attorney general against lawlessness and violence in connection with the shop crafts strike will be aided by every power of the shop crafts organization.

It can hardly be assumed that the federal court has intended to restrain, or has restrained, those lawful acts necessarily involved in carrying on the legitimate work of labor organizations, some or all of whose members are engaged in a legally conducted strike to accomplish lawful purposes. Such acts, including peaceful picketing, as have been repeatedly and recently held to be lawful by the Supreme Court of the United States, cannot be assumed to come within the provisions of the restraining order entered by Judge Wilkerson.

At least until advised that the constitution of the United States and the decisions of the Supreme Court are no longer to be relied upon as the law of the land, the officials of the organizations of railway employees will continue to perform their legitimate duties to their members, to aid them in the lawful pursuit of their lawful purposes, and to do all in their power, in conjunction with the officers of government, to restrain and to punish every unlawful act of those who are rightfully involved or who without right involved themselves in the operation of the railroads.

WASHINGTON, D. C.

White House that he is determined to make transportation as efficient as possible, now that the settlement of the coal strike has changed the fuel problem from one of production to one of distribution by reason of the heavy burden placed upon the railroads by the necessity for trying to make up for the lost production of the five months' strike.



If the injunction is not sufficient the President is prepared to take such other steps as may be necessary. This is taken to mean prosecutions for violations, although by some it has been interpreted to mean use of federal troops. In reply to a question as to whether any action was contemplated against the railway executives, it was stated at the White House that the President thinks they are "doing the best they know how at present," and that, if any action had to be taken in that direction, it would involve the railroad properties rather than the executives.

The injunction step has been under debate in the Cabinet for some time but it is understood the President was unwilling to approve of it until he had exhausted every effort to bring about a settlement by mediation and until the issue had been laid clearly before the public in such a way as to demonstrate plainly that the President was not being influenced by sympathy with either side and had not joined in any alleged campaign to "break the unions," but had waited until he

commerce. After the strike actually became effective an injunction could not return the men to work, but now that the railroads have been able to build up a sufficient force to carry on operations it is believed that it is only necessary to prevent interference with them. It is apparently the President's idea that if, with the injunction enforced and protection afforded, any railroad is not able to perform the necessary service with such assistance as its neighbors can afford it, then it will be time to consider the drastic step of government operation which the President has said he would undertake only as a last resort.

In reply to a question as to the possible effect on the strike of a reversal of the Labor Board's resolution of July 3, the President was represented as believing that no exigency would justify the board in determining its attitude or adopting any course under the menace of a strike.

That the strike situation was regarded by the administration as having probably passed the critical stage was indicated by an announcement on Friday that the Cabinet meeting that day had not discussed the strike, for the first time for several weeks, but had devoted its attention to other matters.

Newspaper stories regarding the status of A. O. Wharton as a member of the labor group of the Railroad Labor Board, under leave of absence as president of the Railway Employees' Department of the American Federation of Labor, have failed to cause any perturbation on the part of the President. It is understood that he was informed of the situation after the strike began, but not in any formal way, and it was pointed out at the White House that at the time of Mr. Wharton's renomination he was represented to the President as one of the ablest members of the board and there was no opposition to his appointment.

At the White House on Tuesday it was stated that the government does not intend to abridge the liberties of anyone under the Constitution, the idea being merely to prevent interruptions to interstate commerce.

### Samuel Gompers on the Injunction

News of the Chicago injunction was met by Samuel Gompers, president of the American Federation of Labor, with violent denunciation and a rather indefinite threat of a "general strike." He said the federation has no authority to call a strike and he did not know what would be done, but that the matter of recommending a general strike would be taken up at a meeting of the executive council of the federation on September 9. It would then be his duty, he said, to bring to the attention of the executive council the numerous demands for such a strike received from various local organizations. He declined to say whether he would make a recommendation and while he said that the injunction would "stir up a hornet's nest" and hinted at action by the brotherhoods and other railroad labor organizations, he refrained from predicting what they would do. He attacked the injunction as an invasion of constitutional rights and a "process for the manufacture of radicalism and Bolshevism," and Attorney General Daugherty as acting as attorney for the railroads. Mr. Gompers discussed the injunction almost as if it were an injunction against striking, saying that strikes are not unlawful, and that all the shopmen have done is to "stop work and nothing else." It is the view of the federation, he said, that such injunctions should be treated as scraps of paper but he declined to say whether he would advise such a course on the part of the men enjoined.

The following telegram addressed to Mr. Jewell, signed by Mr. Gompers, was made public on September 2, at the headquarters of the American Federation of Labor: "At the meeting of the labor legislation representatives, July 21, a resolution was adopted conveying to you and through you to the striking railway shopmen the pledge of our sympathy and support to the fullest extent within our power. At the



From the Birmingham Age-Herald

**Looks As Though They'll Have to Wire Uncle Sam for the Wrecker**

was forced to act to prevent the available fuel from being kept from the public by unlawful interference on the part of strikers in their efforts to keep others from taking "their" jobs. The injunction gives the federal government an opportunity to act where state and local authorities have been slow to prosecute cases of violence.

While the preparations of the government to use injunction proceedings to prevent a strike of train service employees last fall was instrumental in pointing a way to a calling off of that strike, the administration did not feel so sure of itself about July 1 in connection with the shopmen's strike, for two reasons. In the first place there was a rather general feeling that the strike threat was a bluff to see whether the Labor Board would yield, and in the second place it was not so clear that it could be argued before a court that a shop strike, conducted peacefully and consisting only of a withdrawal of men from service, could seriously interfere with interstate

meeting of the same conference this evening it was decided to ratify and emphasize the declaration made July 21 and pledge anew our sympathy and support and the best wishes for the success of the striking railroad shopmen in the attainment of their just cause."

W. H. Johnston, president of the International Association of Machinists, said the injunction would not cause the slightest abatement of efforts to win the strike. "We will ignore the injunction," he said. "It will give the men greater zeal to fight their battle." Mr. Johnston was also outspoken in his denunciation of the injunction, before it had been served on him, in a speech at a meeting of the former employees of the Washington Terminal Company.

#### Injunction Discussed in Senate

The dispatches also quoted Secretary Scott as saying that injunction and of Attorney-General Daugherty in asking for it was the subject of considerable criticism in the Senate on Wednesday.

Senator Robinson of Arkansas brought up the question in a prepared speech. Senator Watson of Indiana took issue with some of his statements and defended the course of the administration. He contended that until Judge Wilkerson had had the opportunity to hear argument on September 11 for and against making the restraining order permanent, an open discussion of the matter in the Senate was questionable.

Mr. Robinson conceded that it was proper for a judge to issue an injunction to prevent injury to persons and property during the prevalence of a strike, but he thought that the temporary order went too far, and that it infringed the constitutional guarantees of free speech, freedom of the press and the right of the people peaceably to assemble.

There seemed to be little disposition on the part of Senators to take part in the debate. Their frame of mind appeared to approximate that of Senator Watson in deprecating discussion pending the hearing on the application for a permanent injunction.

#### Shop Leaders Will Have Day in Court on Monday

Attorney General Daugherty complained in a statement issued Wednesday that many of the leaders of the striking railway shopmen have disappeared before they could be located by Federal process servers. He declared also that if labor leaders feel they have been deprived of the right of free speech, they will have full opportunity to express themselves in court on Monday "under circumstances that will give the greatest value to their utterances."

The statement said in part:

The Government will consider in due time what proceedings shall be taken against the few misguided labor leaders who have made incendiary speeches with the purpose of defeating the administration of justice. The rank and file of labor organizations are loyal and law-abiding citizens, and I am satisfied that they will be content to submit the issues in the Chicago injunction suit to the orderly processes of law and to abide by the decisions of the courts as to what is the law of the land.

A few misguided labor leaders—some of them avowed Bolsheviks—who have shown a contempt for the courts and the processes of law, need not complain that they are denied the full privilege of free speech. It is my intention, if it shall prove necessary to proceed with the equity suit, to give them the fullest opportunity of free speech and under circumstances that will give the greatest value to their utterances, for I propose, when the court next hears this case, that the leading defendants shall have the fullest opportunity to take the stand and testify under oath as to whether or not they are responsible for instigating and carrying on the unquestioned conspiracy to paralyze transportation in this country.

#### Daugherty Wants to See Correspondence

If they are reluctant to tell their side of the story, I shall be disposed—although the Government's evidence will make it unnecessary—to call the leading defendants to the witness stand, and they will then have, as I said, the fullest opportunity of free speech and under the most satisfactory conditions.

In this proposing to put before the country not only the Government's case, but any possible defense, I am somewhat hampered by the fact that the government's process servers have had great difficulty in locating the leading officials of the shop crafts organization. No lawyer has yet formally appeared for them in the Chicago suit, and this is disappointing, as I desired to serve notice upon him to bring into court next Monday all the books, letters, telegrams and other documentary data of his clients, so that the public could judge whether or not they continuously attempted to paralyze interstate commerce and thus starve the community in order to enforce by coercion their demands.

I am today instructing the United States attorney at Chicago to serve notice on the counsel for the defendants when such counsel is selected, to produce those of his clients who are the leading officials of the shopcrafts organizations, together with all their books, correspondence, financial accounts, check books, and other documentary data. I must presume that they will welcome this opportunity to put their case before the court and thus the public, and I give little credit to the rumors that any of these defendants have gone to Canada and taken with them the records of their activities. Such a course would be foolish, as the Government is not without duplicates of much documentary evidence and can readily subpoena the telegraph companies to produce the telegrams.

If this minority of labor leaders who have denounced the actions of the courts are not willing to come into court and tell their side of their story on the solemnity of their oaths as witnesses, then the public, which only desires fair play, is likely to draw its own conclusion.

### Collapse of Strike in Sight, Says Cuyler

On September 1, the railroads had approximately 305,000 employees engaged in the maintenance of cars and locomotives, as against about 400,000 in June, 1922. This is characterized in a statement issued Wednesday by T. DeWitt Cuyler, chairman of the Association of Railway Executives, as "the best evidence that the collapse of the strike is in sight." Mr. Cuyler's statement continued:

During the past week the railroads have been recruiting their forces at the rate of some 5,000 or 6,000 men per day. It is estimated that at least half of these are the older and more experienced men among the strikers. They are voluntarily returning to work on terms which do not violate the obligations of the railroads to either their loyal employees or to the new employees.

In many cases it was July 10, and in others July 17, before the railroad companies set about seriously to recruit their forces. Prior to those dates they generally held the positions of their striking employees open for them without loss of seniority and other rights. On July 10 the railroads had at work in their shops and roundhouses approximately 155,685 men. On July 20 the total number of these employees was only 162,749.

From this it may be seen that practically the entire progress made in recruiting new employees has been since July 20. On July

31 the railroads had 191,440 employees of this class; on August 15 237,340; on August 31 approximately 292,000.

These figures do not include returns from some 50 railroads, which it is estimated have at least 13,000 men at work, making a total for the entire country of approximately 305,000.

Since the rights of the loyal men who remained at work and of new men engaged during this difficult period have been prominent in public discussion, it is interesting to note that there were about 155,000 loyal employees, and that about 150,000 new employees have been added.

Reviewing the situation more generally, the statement said:

The maintenance of equipment was materially improved in August, and will be still further improved in September.

The car loading figures issued weekly show that during the two months of the present strike the railroads have loaded with revenue freight over 500,000 more cars than they loaded during the same eight weeks of 1921, when there was no strike.

For the week ending August 25 bituminous coal production was increased to about 6,700,000 tons, from about 4,500,000 tons the preceding week. The probability is that the week ending September 2 will show that the railroads loaded over 9,000,000 tons which is more than an average weekly output.

While obviously, the commerce of the country cannot be carried with the same speed and facility as would have been possible had



no strike taken place, at the same time the railroads are providing transportation for all essential purposes. Evidence of the ability of the roads to render effective transportation was furnished on Labor Day when the volume of business, the greatest in the history of the roads, was handled without friction and with only the usual delay incident to heavy travel.

The railroad companies deeply appreciate the support which has been given them in the present strike by the public opinion of the country.

If the people of the United States will continue to evidence their good will just a little longer, they will see the present strike terminated in such a way as to add greatly to their protection against unwarranted attempts to interrupt transportation in the future.

Recruiting of shop employees gave the railways a net increase in their number of shopmen of 2,419 on September 1, and of 1,144 on September 2. On Labor Day there was a further increase of 3,317. These figures are somewhat below

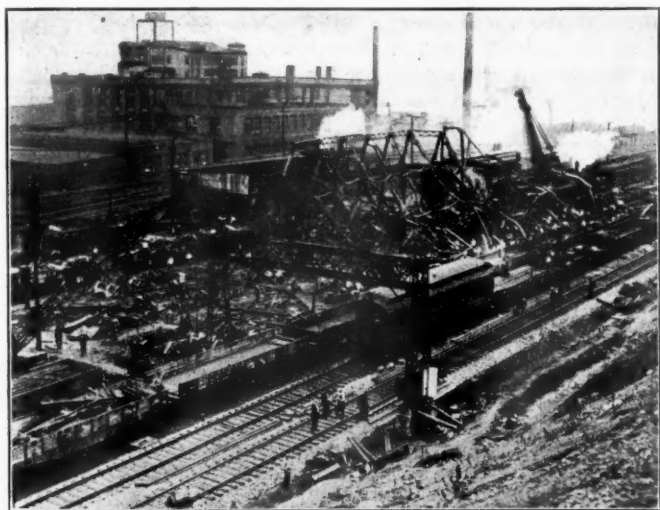


Photo by International

**The Ruins of the Pennsylvania's Car Shops at Pittsburgh, Destroyed by Fire, Believed Incendiary, Killing Seven and Injuring Many**

the totals which have reported for some of the preceding days of the strike.

#### Eastern Roads Have 79 Per Cent Normal Forces

L. F. Loree, chairman of the Eastern Presidents' Conference, in a statement Tuesday, announced that further gains had been made by the eastern roads in recruiting men to take the places of the striking shopmen. He said:

"The railroads in the eastern district report their shop forces for the last six weeks to have been as follows:

		Per cent.	Weekly gain
July 28.....	97,724	62.0	.....
Aug. 4.....	103,528	64.7	5,804
Aug. 11.....	111,324	69.0	7,796
Aug. 18.....	115,745	71.5	4,421
Aug. 25.....	121,890	74.9	6,145
Sept. 1.....	130,910	79.86	9,020

"Any suggestion to the men not on strike is likely to be regarded by them as criticism, but without any criticism of their conduct or attitude, and solely from the point of view of one who has worked with them for more than 55 years, I cannot but feel that in view of the above showing those of them who desire to continue in the railroad service would be well advised if they availed themselves of what opportunity is left to secure positions."

#### Equipment Conditions

Bad order cars on August 15 totaled 335,575, or 14.8 per cent of the total cars on line. This was an increase of 10,992 cars over the total on July 1, when the shopmen's strike began, but a decrease of 9,438 cars from the total on August 1. The July 1 figure was 324,583 cars in bad order, or 14.3 per cent; the August 1 figure, 345,013 cars, or 15.3 per cent.

Commenting on these figures compiled by the Car Service Division of the American Railway Association, a statement of the Association of Railway Executives said:

The total number of bad order freight cars on August 15 last was 46,865 less than the total in need of repairs on August 15, 1921, and 3,247 less than on June 1, 1922, at which times no strikes of railway employees were in progress.

These tabulations are based on reports received directly by the Car Service Division from roads representing 98.6 per cent of the total mileage of the Class 1 railroads and owning 99.3 per cent of the cars on line.

The carriers in four (Eastern, Allegheny, Southern and Central Western) out of the seven districts, reported reductions in the number of cars in need of repairs on August 15, compared with August 1, while there were slight increases reported in the other three districts.

Despite the shopmen's strike, there was a decrease of 2,394 bad order cars in the Eastern district on August 15, compared with July 1. The total for that district on August 15 was 106,181, or 17.9 per cent of the cars on line in that district, while on July 1 it was 108,575, or 18.3 per cent. The Southern and Central Western districts had only slight increases on August 15, compared with July 1. Small increases were reported in the other districts.

The number of bad-order cars and percentage of bad-order cars to cars on line on August 15 compared with July 1 follows:

Districts	Cars	August 15 Per Cent	Cars	July 1 Per Cent
Eastern .....	106,181	17.9	108,575	18.3
Allegheny .....	63,575	13.7	59,973	12.6
Pocahontas .....	13,056	13.4	10,694	10.7
Southern .....	51,086	17.2	50,953	17.8
North Western .....	44,231	13.7	39,055	12.3
Central Western .....	35,700	11.2	35,754	10.7
South Western .....	21,746	13.1	19,579	12.4
Total .....	335,575	14.8	324,583	14.3

The number of bad-order cars and percentage on August 1 follows:

Districts	Cars	August 1 Per Cent
Eastern .....	108,919	18.4
Allegheny .....	64,149	13.6
Pocahontas .....	12,541	13.0
Southern .....	53,762	18.6
North Western .....	43,140	13.3
Central Western .....	40,844	12.7
South Western .....	21,658	13.1
Total .....	345,013	15.3

#### Labor Day Rush Handled Without Difficulty

Shippers are continuing to report delays to fast freight traffic, which on most roads is not being moved according to schedule. The shop strikers' publicity is making much of delays in fast freight deliveries and pointing out that the food supplies are being endangered by the failure of the railroads to operate their trains on schedule. The railway officers, however, point out that the delays are in no case serious and that in no wise is the movement of food supply in danger. They admit that the strike is unquestionably having some effect, but point out also that a great deal of the diffi-

culty is due to the congestion resulting from increased traffic.

A real test of the effect of the strike was offered to the railways over the week-end in the form of a record-breaking holiday passenger traffic.

The Pennsylvania reported that the number of passenger trains moved to and from the Pennsylvania Station, New York City, on Saturday, September 2, was the largest in the history of this station—883 trains. This includes the business of the Long Island Railroad, which was very heavy. The number of coaches, parlor cars and baggage cars in

these trains was 6,587 and the estimated total number of passengers was 300,000.

Between Philadelphia and Atlantic City, the railroads carried their usual crowds; and, in addition, had to run all available ferry boats between Philadelphia and Camden because of the rush of automobiles returning from Atlantic City. On Monday evening, automobiles entered the Pennsylvania ferry shed at the rate of 700 an hour. The Pennsylvania ran 12 boats and the Reading eight.

The Pennsylvania, reporting on New Jersey seashore travel, gives a total for the four-day period, September 1-4, to and from Atlantic City, Ocean City, Wildwood, Cape May and other points, of 189,000 persons, an increase over last year of 23,460, or 14 per cent.

During the same period between New York and Philadelphia, in both directions the total number of passengers was 162,226, an increase of 10,834, or 7 per cent, while between New York and northern New Jersey resorts the total was 59,065 passengers, an increase of 2,832, or 5 per cent.

The New York, New Haven & Hartford found it necessary to provide for the holiday traffic 335 extra coaches, 112 extra parlor and sleeping cars and 45 locomotives. The company's statement says that passenger trains were moved reasonably on time, and this in spite of two unusual and heavy rain storms. At the same time, the number of freight trains moved on Sunday and Monday totaled 34,663 cars, nearly 4,000 more than in the same period last year; freight business did not have to be delayed in order to operate the passenger trains. The mechanical departments, largely organized since the beginning of the strike on July 1, "functioned in a manner that would have been creditable to a group of older and more experienced men," the statement went on further to say.

An officer of the Boston & Maine, telling of the large number of extra trains between Boston and Portland, Maine, and elsewhere, said that summer camps, largely maintained for boys and girls, produced this year more than 25,000 passengers for the road. This camp business has grown up mostly within the past ten years. There are more than 300 such camps on the lines of the Boston & Maine and the Maine Central.

#### Baltimore & Ohio to Pay Bonuses

The Baltimore & Ohio announced on Monday that beginning with September 1 all skilled mechanics will be paid a bonus of \$1 a day as compensation for the abnormal conditions under which they are working at the present time. The company plans to erect barracks for shopmen at Brunswick, Md.; Cumberland, Md., and Benwood, W. Va. At Grafton, W. Va., the company has bought a hotel for a similar purpose.

#### Eight Shopmen Burned in Pittsburgh Fire

In a fire at Pittsburgh, Pa., on Sunday morning, September 3, eight shopmen, employees of the Pennsylvania Railroad, were burned to death and eleven others severely injured. The building, a structure 175 ft. by 300 ft., was a repair shop and commissary and was being used temporarily, in the second story, as lodging quarters for new employees engaged since the strike. The fire was discovered by a negro cook about 4 a.m. and spread rapidly. While police and others were doing their best to rescue the victims of the fire, a large crowd of men, said to be strikers, stood on a cliff overlooking the building and hurled stones at the injured and their rescuers until driven away by police. The loss sustained by the railroad is estimated as follows: Building, \$50,000; supplies, \$150,000; damage to an oil house, tracks and cars, \$10,000.

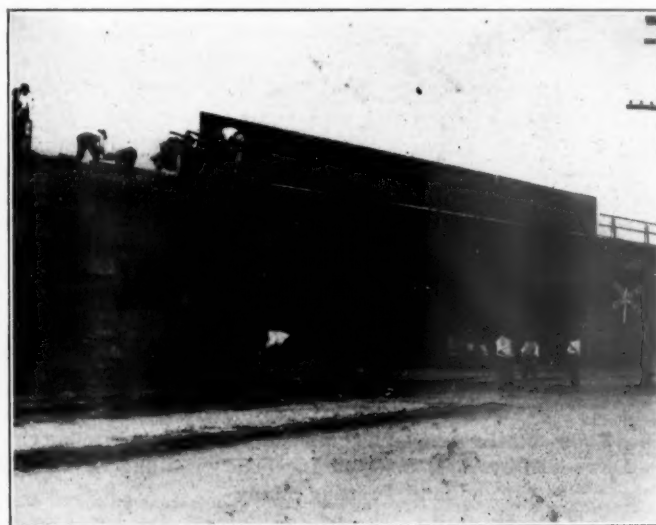
A bridge of the Pennsylvania Railroad was dynamited at Wilmington, Del., on the night of August 30 and some damage done to the tracks, but none to the bridge. The bridge

was not a main-track bridge, but was on a side track leading to the Pullman car shops.

#### Sentenced to Six Months

In the United States District Court at Nashville, Tenn., on August 30, G. E. Ryman, a striking shopman, was sentenced to six months' imprisonment and to pay a fine of \$500 in court, Ryman having been found guilty, by a jury, of violating the injunction granted the Tennessee Central against striking employees. Ryman appealed and was released under a bond of \$1,500, the court allowing 20 days in which the case might be appealed. On August 31, three men were fined \$250 each in the same court for violating the injunction granted to the Nashville, Chattanooga & St. Louis. All three appealed and were released on bonds of \$1,000 each. The men had attacked an employee of the road; Ryman had used incendiary language and had struck an employee who disputed him.

In the federal court at Lynchburg, Va., on September 4 an attachment was issued for the arrest of L. A. Taliaferro, a barber, of Clifton Forge, on the charge of conspiring with



P. & A. Photo

**Workmen Repairing Pennsylvania Bridge at Wilmington, Del., After It Had Been Damaged by a Bomb**

Chesapeake & Ohio strikers to annoy railroad employees. It is alleged that Taliaferro posted a notice in his shop which read: "Scabs not served here." A similar process was taken out against a man in Roanoke on the charge of intimidating Norfolk & Western employees.

#### Canadian Wages Reduced

The Board of Conciliation, at Ottawa, Ont., has recommended that the shopmen of the Canadian Railways, numbering 35,000, accept temporarily the reductions in wages which have been proposed by the railroad companies, ranging from five cents to nine cents an hour.

#### Pennsylvania to Enlist Co-operation of Shippers

Instructions to take immediate measures with a view to enlisting the co-operation of all shippers and receivers of freight, on the Pennsylvania Railroad System, in getting more work out of each coal car than was ever before thought possible, have been issued by General W. W. Atterbury, Vice-President in Charge of Operation. The appeal is based upon the urgency of the situation arising out of the coal shortage, and the approach of winter. General Atterbury has addressed the following directions jointly to the four Regional Vice-Presidents of the Pennsylvania System:



With the resumption of mining in both the bituminous and anthracite fields, the most essential work ahead on our Railroad is that of moving coal.

As a vital part of our plans, I wish each of you to take at once whatever steps are required to impress upon our patrons, in your respective regions, the urgency of the situation, and particularly, the absolute necessity for loading and unloading coal cars with the greatest possible promptness.

We are faced with the most serious coal shortage in the country's history. To avert or minimize widespread suffering and loss, we must make up as much of that shortage as possible before winter sets in.

Coal cars must be kept moving to and from the mines faster than ever before. We must get more service out of every car than has ever before been attempted. To make success possible, loading and unloading must be done in absolute minimum time and everyone using coal equipment must be made to realize the moral duty of releasing the cars as swiftly as possible, in order that they may be returned to the mines for more coal with the least possible delay.

I am confident that when the vital importance of this matter is made clear to our patrons, we shall receive their full support and co-operation.

### Strike Developments in Chicago and the West

While the latest moves of the government in the strike situation have taken all the front page space during the past week, there have been buried in the inside pages innumerable reports of violence directed at the destruction of railroad property or the intimidation of those who are now working. Throughout western territory the bombing of railroad structures and tracks and the homes of loyal employees, the

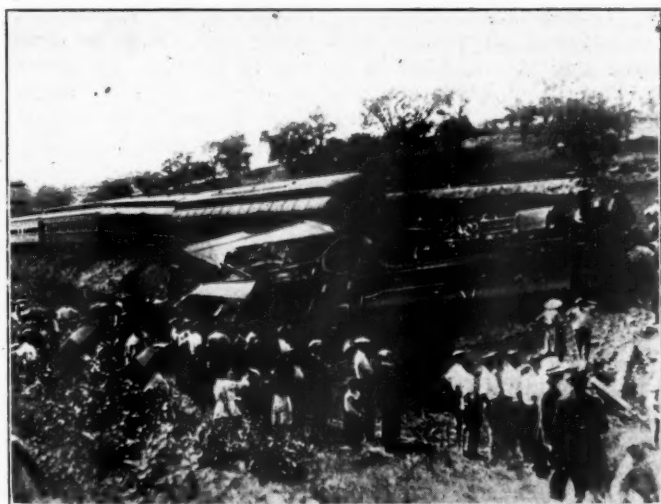


Photo by International

### A Derailment at Waukesha, Ill., Thought to Have Been Caused by Malicious Tampering with the Roadbed

attempted destruction of bridges by fire, the efforts to wreck trains, and the usual riotings have accompanied the ninth week of the shopmen's strike.

On August 31, a Pennsylvania bridge at Wilmington, Del., and bridges near Indianapolis, Ind., and Cincinnati, Ohio, were dynamited. Several attempts were made to wreck trains, although the property and personal damages were comparatively slight, at Waukesha, Wis. The derailment of a Chicago & North Western train resulted in the death of an employee and the injury of several others. A Big Four passenger train was derailed near Brownsville, Ind., and one woman passenger injured. The most serious wreck attributed to the part played by strikers was the wrecking of a St. Louis-San Francisco passenger train near Cape Girardeau, Mo., resulting in the loss of two lives and injuries to a number of the passengers. The train crashed through a damaged trestle.

Rioting, slugging and similar instances of violence were also reported during the past week at Augusta, Ga.; Sedalia,

Mo.; Memphis, Tenn.; La Crosse, Wis.; Algiers, La.; Council Bluffs and Clinton, Iowa and Missoula, Mont. At Memphis, Tenn., a non-union shop worker was murdered as he was on his way to work in the St. Louis-San Francisco shops. At Cleveland, Ohio, one striker was killed as he attempted to take the life of a non-union worker in the vicinity of the New York Central shops.

A comparatively new form of violence was introduced into the strike with the burning of seven bridges on the St. Louis Southwestern between Texarkana and Stamps, Ark. A similar attempt was also made on the Atchison, Topeka & Santa Fe near Tecumseh, Okla.

A threatened walkout by train crews at Parsons, Kan., was averted when guards were removed from inside the Missouri, Kansas & Texas yards. Firemen refused for a time to move two trains on the Southern railway at Asheville, N. C., because of the altercation between a hostler and a guard, and Louisville & Nashville trainmen were taking a strike vote at Corbin, Ky., following alleged insults by guards.

The issuance of federal injunctions to restrain strikers or their sympathizers from interfering with the operation of trains has continued as have the arrest and conviction under previous injunctions of former shopmen.

### Further Move Toward Ending

#### Strike on 52 Roads Rumored

Associated Press dispatches on Wednesday were authority for a statement that a call for an immediate meeting of the policy committee of 90 in Chicago, probably on Monday, was sent out Wednesday night by John Scott, secretary of the striking railway shop crafts unions.

The telegraphic appeal was in code and was addressed to the regional general chairmen of the organization in all parts of the country. The meeting was called, it was intimated, to consider plans for a settlement of the strike on separate roads representing about one-third of the country's mileage. It followed reports of conferences between B. M. Jewell, head of the strikers, and rail executives in the East.

In discussing the meeting of the union Executive Committee, Mr. Scott said that it was hoped that the sessions would result in settlement with at least 52 Class I roads. He said that the expense entailed in assembling the strike leaders would not have made it worth while to issue a call unless there was a possibility of a settlement being reached.

The dispatches also quoted Secretary Scott as saying that seven representatives of the striking Federated Shop Crafts, were in Baltimore for a conference with railroad executives on a proposition to end the strike. Mr. Scott intimated that a proposal on which it was hoped the strike could be halted had been prepared, but he would not outline it. The conference, he is quoted as saying, was to have been kept secret.

The story that such secret conferences were to be held persisted in spite of denials by various executives in Chicago, by officers of the Baltimore & Ohio and by Thomas DeWitt Cuyler, chairman of the Association of Railway Executives.

### A. F. of L. Executive Council Meets

Leaders of the American Federation of Labor, assembled in Atlantic City prior to the opening of the session of the executive council, scheduled for Saturday, gave every indication that it was their intention to have the Federation join in contesting in the courts the injunction against the shop unions. It is understood that leaders of the transportation brotherhoods will be asked to attend the meeting of the council to review their acts as mediators between the shopmen and the railroads. Feeling in the Federation is said to be most bitter against the transportation brotherhoods, which are not members of the Federation, because of their alleged lack of interest in the success of the shop strike.

## Labor Board Concludes Hearing on Maintenance Wages

**H**EARINGS before the Railroad Labor Board on the demands of maintenance of way workers for the establishment of a "living wage" and a minimum rate of pay of 48 cents an hour were completed on September 1 with comparatively brief presentations by representatives of the eastern, southeastern and western carriers. Throughout the railroad testimony there runs a note of conciliation, the only extended defense put forth being directed at the living wage theories expounded by W. J. Lauck, Arthur Sturgis and J. C. Smock.

The testimony of the employees was abstracted in last week's *Railway Age*. That of the eastern and western roads follows:

### Jacob Aronson Appears for Eastern Carriers

The cost of living has not increased sufficiently in the last three months to warrant any changes in the wages of maintenance of way employees on the eastern railroads, according to the presentation made before the Board by Jacob Aronson, counsel for the eastern carriers. Section laborers in the eastern territory, he said, are now receiving an average of 37.1 cents an hour, although the average for the United States is 32.7 cents under the decision of the Labor Board which became effective July 1. "This average rate for July, 1922," Mr. Aronson added, "is 123.5 per cent increase over the average hourly rate of 1915, leaving these classes of employees 33.7 per cent better off than they were in 1915, after making due allowance for the reduction in their wages on July 1."

"For section foremen, the monthly wage of \$147.58 in July, 1922, represents an increase of 107.4 per cent over 1915. The purchasing power of the earnings in July, 1922, leaves these employees 24.3 per cent better off than they were in 1915."

"The average hourly rate of 62.1 cents in July, 1922, for mechanics included in maintenance of way service, is an increase of 121.8 per cent over 1915, leaving this class 32.9 per cent better off in purchasing power after making due allowance for the reduction in their wages on July 1."

The exhibits accompanying Mr. Aronson's testimony covered a total of 95,254 employees in the maintenance of way department and showed that the present rates of pay for these classes of employees on the railroads, compared favorably with rates prevailing in outside industries in eastern territory.

Counsel for the maintenance of way employees frequently referred to the recent increase of 20 per cent in wages granted by the United States Steel Corporation. Mr. Aronson drew attention to the fact that the hourly rate of pay of the steel corporation including the recent increase will be 36 cents an hour, whereas the present average hourly rate of maintenance of way employees is 37.1 cents. The average hourly rates of the railroads in the eastern territory are 123.5 per cent greater than in 1915 as compared with an 80 per cent increase in the average hourly rates paid by the steel corporation. Mr. Aronson emphasized also the fact that the steel corporation's prices have increased 17 per cent since February 1 this year, while freight rates on the railroads were decreased 10 per cent by the recent ruling of the Interstate Commerce Commission.

The assertion that the average American family needs a definite minimum wage was attacked by Mr. Aronson on the broad general grounds that the average American family does not consist of five persons as arguments presented by labor witnesses indicate; that the average workman does not support a family of that size; that the grounds upon which such an assumption are based are wholly inaccurate,

and finally, that there is no such thing as a standardized cost of living.

Instead of the average American family containing five persons dependent upon the wage earner Mr. Aronson showed with figures from the United States census for 1920 that the average family really is 4.4 persons regardless of age, and that there is actually an average of 1.4 dependent children for each of the 24,351,756 families in the United States. He said also that instead of only one male worker supporting a family of five, there are actually 1.36 male workers per family or a total of 33,059,793 for the 24,351,756 families.

American railroads, Mr. Aronson said, had approximately 1,658,000 employees in the last six months of 1921. Upon the theoretical basis of 1.36 male workers to a family, assumed by the labor witness there would be 1,213,235 families. Counting three children to the family, Mr. Aronson pointed out, would result in 3,639,705 children or 10.4 per cent of the children of the entire United States; 1,650,000 workers are about 5 per cent of the male workers of the country.

To construct wage schedules on these theories, Mr. Aronson declared, would require more money than all industries earn, and on the railroads would call for revenues beyond anything the public could stand. Reductions in living costs would be impossible in such conditions. "To compare living costs in different communities," Mr. Aronson said, "uniform bases must be used, but such comparisons could have no practical value. When this country adopts a principle that wages of all workers shall contain provisions for perhaps a desirable increase in the size of families, applicable alike to all employers and workers, we respectfully submit that some entirely different methods will have to be invoked for calculating wage schedules than are now being demanded."

### J. W. Higgins Appears for Western Roads

That section men usually are nearest the line at which income circumscribes the standard of living and the belief that this might be overcome if wages were fixed with regard to local conditions, was frankly admitted by J. W. Higgins representing the western railroads.

This consideration for the difference in expenses in different localities, Mr. Higgins said, might well prove to be a satisfactory method for arriving at a just and reasonable wage. This, Mr. Higgins conceded, although denying that there had been any increase in the cost of living sufficient to warrant the advances demanded by the maintenance of way employees.

"Most of the employees in the maintenance of way department are so-called unskilled laborers," Mr. Higgins said. "This class of labor throughout the industrial world is the first to react to business conditions and their wage scales are the first to go up and the first to come down under pressure of economic influences. The Labor Board recognized this condition in a former ruling (Decision 1074) when the majority opinion said: 'In this connection it must be remembered that the carriers are at liberty to pay any class of employees a higher wage than that fixed by this board whatever the so-called labor market compels, provided, as the Transportation Act states, that such wage does not result in increased rates to the public.'"

"That the scale of wages paid in outside industries has a direct influence on the railroad employees cannot be denied. There is also a great variation in the wage scales for similar kinds of work in industries in various parts of the country showing that recognition is given to local influences, living costs, etc. In the wage hearings last April I urged the board to give careful consideration to the matter of fixing territorial wage scales that would comprehend the different conditions in various sections of the country and pointed out



that certain territorial and local differentials existed in wage rates prior to federal control, which would facilitate building up rates for each locality thinking the board would take as a basis the rates of pay for track laborers that were in effect on the western railroads in December, 1917, and add thereto an amount sufficient to compensate for the changed cost of living since that time. This suggestion was advanced on the theory that pre-war rates were the result of natural influences and that the differentials prior to federal control were accordingly fairly well-established, both as between localities and as between different classes of employees."

Such a course is necessary, Mr. Higgins declared, if it is the intention of the board to restore the wage relationship that existed prior to the war. "We know that pre-war differentials which were so seriously disturbed during federal control," he continued, "due to war conditions, will never return so long as wage adjustments continue to be made on a flat basis of so many cents an hour or a day, regardless of local conditions."

"There has been no change in the attitude of the western railroads in the wage hearing last spring, Mr. Higgins said, with respect to varying wage rates in different localities, and subscribing to a minimum wage that would assure a subsistence of the worker and his family in health and reasonable comfort according to the cost of living fixed by the custom in respect to localities. While it does not appear to us that there have been changes of sufficient importance in the brief period since the last wage hearing to warrant a reduction of the wages fixed at that time, the western railroads are ready to co-operate with the board and the maintenance of way employees if and when conditions favor wage readjustment, or if in the judgment of the board this re-hearing" shows that a change should be made.

Referring to the employees' requests for changes in working rules, Mr. Higgins declared that in the opinion of the western roads there had been no changes in the conditions of employment in the maintenance of way department that would warrant the granting of the change now requested.

## Bituminous Coal Production Picks Up Rapidly

Problem in Soft Coal Fields is Now Largely One of Transportation—Some Coal Car Shortages

WASHINGTON, D. C.

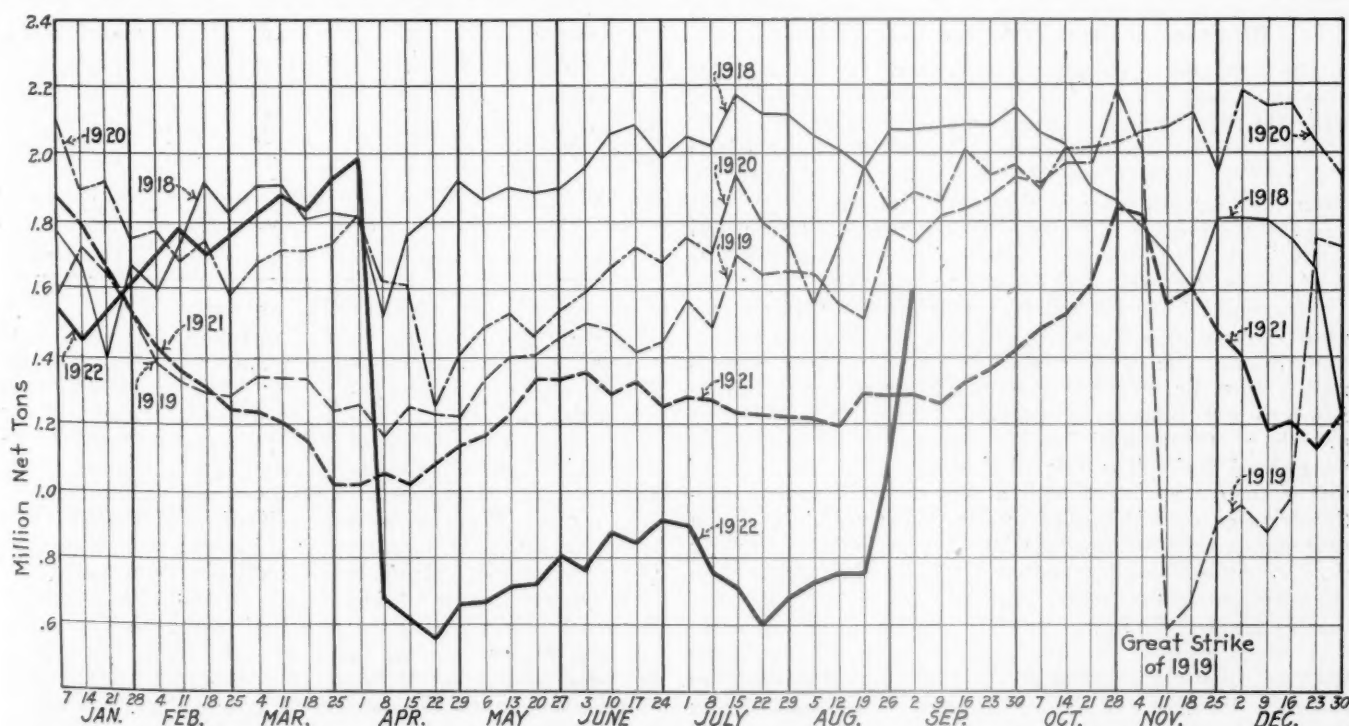
**S**OFT COAL PRODUCTION shot upward almost as suddenly last week as five months ago it had plunged downward, when district after district accepted the Cleveland wage agreement and resumed work. Late returns for the week of August 21-26 indicate an output of 6,700,000 tons of bituminous coal and the week of August 28-September 2 will show 9,200,000 or possibly 9,700,000 tons, according to the Geological Survey bulletin. The anthracite mines, however, are still idle.

The rapid gain in output is indicated by the statement of cars loaded daily. Following a sharp increase on Friday and Saturday as coal began to flow in volume from the mines of Illinois and Indiana, last week opened with load-

ings of 30,054 cars on Monday. A decline to approximately 28,000 cars on Tuesday and Wednesday marked the first tightening of car supply. On Thursday additional shipments began from Western Pennsylvania, and loadings reached 29,027 cars.

	1st week	12th week	18th week	19th week	20th week	21st week	22nd week
Monday .....	11,445	15,311	15,102	16,229	15,703	18,601	30,054
Tuesday .....	11,019	16,622	11,446	13,729	13,032	17,801	28,153
Wednesday .....	11,437	17,032	12,447	13,368	12,531	18,524	28,211
Thursday .....	11,090	16,432	12,380	13,277	13,521	19,388	29,027
Friday .....	11,296	16,073	12,669	13,539	13,718	22,882	.....
Saturday .....	8,888	13,993	12,405	11,009	13,524	23,070	.....

From the detailed statistics of shipments it is seen that this increase came almost exclusively from mines opening



Estimated Average Total Production Per Working Day Bituminous Coal Including Coal Coked

under the Cleveland agreement. The non-union districts of the Middle and Southern Appalachians were still limited by railroad disability and in spite of a slight increase in car supply produced only 65 per cent of the rate attained before the shopmen's strike.

#### Shortage of Coal Cars

"In fact complaints of lack of cars have already been received from the union districts of Eastern Ohio and Northern West Virginia," the bulletin says. "The limiting factor in production of bituminous coal has thus changed over night. A week ago it was the supply of mine labor; today it is transportation. The first response of the railroads to the demand for more service has been favorable, partly because they had a surplus of 112,000 empty coal cars when the union mines resumed work. Whether the roads can maintain the present rate of coal movement when the surplus of cars is exhausted remains to be seen.

"Even in the bituminous mines, the strike is not yet entirely over. Some thousands of men are still out in the non-union fields of Pennsylvania, particularly the Connells-ville coke region, in the Georges Creek field, and in the union districts of West Virginia."

In few districts did operations controlled by the agreement begin shipping during the week of August 19. A number of mines in the Number 8, Cambridge, and other districts of Eastern and Northern Ohio were working on Friday and Saturday. In Southern Ohio, 59 mines out of a total of 458, were at work by the end of the week but only 17,000 tons were loaded. Shipments began also from a few mines in Pennsylvania, but from the other districts that have since gone to work no coal was obtained during the week of August 19.

In the districts hitherto at work little change occurred. Transportation service was on the whole less satisfactory in the non-union fields of the Middle Appalachians. Among the districts to report larger losses on account of railroad disability were Pocahontas, Tug River, Logan, Eastern Kentucky, Western Kentucky, and Alabama. In the Winding Gulf, New River and Kenova Thacker districts there was some improvement. The districts to report greatest loss through transportation were Harlan, Hazard and Winding Gulf.

#### Bituminous Production for 1922 to Date

The estimated production of bituminous for the calendar year to August 26 was 223,521,000 net tons as compared with 255,147,000 in the corresponding period of 1921.

Shipments of bituminous coal through Hampton Roads decreased in volume during the week ended August 26. Dumpings for the week of August 26 totaled 310,593 net tons, as against 334,974 tons the week before. Cargo coal for New England increased, whereas coal for other coastwise destinations, for export, and bunker decreased.

The result of the Federal Fuel Distributor's orders was a great increase in soft coal loaded into vessels at Lake Erie ports during the week ended August 27. According to reports from the Ore and Coal Exchange, a total of 258,598 tons was dumped as against 176,640 tons in the week preceding. Of the total 229,770 were cargo coal and 28,828 were vessel fuel. The rate of dumpings is 33 per cent of that in the corresponding week a year ago. The total quantity of cargo coal forwarded during the present lake season now stands at 4,904,994 tons but of this 883,659 tons has gone to destinations not ordinarily taking lake coal. The quantity sent to the regular lake markets is only 4,021,335 tons as against 16,150,110 in 1921 and 10,927,994 in 1920.

A steady increase in dumpings has continued during the week of August 28-September 2. The tonnage dumped on Monday, Tuesday and Wednesday was 74 per cent greater than on the corresponding days last week.

The all-rail movement of coal to New England through the six principal gateways over the Hudson river increased to 917 cars of bituminous coal and 226 cars of anthracite during the fourth week of August. In addition to this movement, eight cars of bituminous coal and one car of anthracite were forwarded through Rouses' Point. The total all-rail forwardings this year to August 26 amounted to 110,632 cars divided as follows: 50,560 cars of anthracite and 58,553 of bituminous coal through the principal gateways; 223 cars of anthracite and 1,296 of bituminous coal through Rouses' Point.

#### Shipments by Districts

In the following table the shipments from the coal-producing districts on each of the first three days of the week of August 28-September 2 are compared with the average daily shipments the previous week and in the week of highest production during the strike (June 19-24).

Shipments during the first half of the week were at a rate 47 per cent in excess of the daily average for the preceding

District	Average wk. ended June 24	Average wk. ended Aug. 26	Monday Aug. 28	Tuesday Aug. 29	Wednesday Aug. 30
Central Pennsylvania.....	27,450	75,958	126,950	134,150	142,800
West. Pa., including Freeport	23,150	39,325	48,950	55,350	62,800
Greensburg-Westmoreland ..	27,476	39,425	39,250	41,500	44,500
Connellsville, & Som. Meyers- dale .....	47,141	58,742	64,850	62,050	55,600
South Fork and Windber....	2,833	8,042	13,700	14,650	15,300
Total Pennsylvania.....	128,050	221,492	293,700	307,700	321,000
Georges Creek, Upper Potomac and Cumberland-Piedmont.	12,083	14,883	14,600	16,000	14,300
Fairmont & W. Va. Panhandle	16,050	87,191	109,600	97,250	88,550
Coal and Coke.....	8,483	8,858	7,550	5,850	7,950
Kanawha and Coal River....	9,783	18,092	28,150	21,900	21,700
Logan .....	65,650	27,225	45,250	16,850	24,700
New River (C. & O. New River Div.).....	31,425	19,367	28,450	16,850	19,750
Winding Gulf (Virginian)...	24,585	17,383	26,650	20,550	18,850
Pocahontas and Tug River...	94,166	71,067	106,100	73,350	70,250
Kenova Thacker .....	33,317	27,400	34,950	34,900	20,950
Total W. Va. and Md....	295,542	291,466	401,300	303,500	287,000
Eastern Kentucky.....	114,567	51,733	69,450	49,900	47,200
Western Kentucky.....	65,767	59,258	48,250	50,400	48,300
Tennessee.....	15,125	16,800	21,700	15,950	15,200
Clinch Valley and S.W. Va..	37,625	22,475	26,900	25,400	22,750
Alabama and Georgia.....	49,858	50,842	59,300	37,800	44,350
Ohio .....	18,358	94,408	122,200	126,950	123,000
Indiana-Illinois .....	2,858	79,308	315,350	331,000	342,800
Iowa, Mo., Kans., Okla., Ark. & Texas.....	13,502	19,675	35,100	47,050	51,300
Colorado .....	29,058	34,325	30,600	31,850	30,050
New Mexico.....	7,000	6,034	7,050	7,200	7,000
Utah .....	12,333	16,783	21,150	19,700	17,850
Wyoming, Mont. and N. Dak.	1,467	10,584	37,800	35,600	35,200
Washington .....	3,450	3,708	3,400	4,500	3,500
Michigan .....	.....	1,475	3,400	4,100	3,650
Total, East of Miss. River.	727,750	889,257	1,361,550	1,252,700	1,255,250
Total, West of Miss. River.	66,810	91,309	135,100	145,900	144,900
Grand total, bitum. shipped	794,560	980,566	1,496,650	1,398,600	1,400,150

week and 81 per cent over that for the week June 19-24.

The districts showing notably increased shipments were Central Pennsylvania where the daily rate is now about double that of the previous week; Western Pennsylvania where the increase is about 40 per cent; Ohio, about 33 per cent; Indiana-Illinois, about 300 per cent; and the Iowa-Missouri-Kansas-Oklahoma-Arkansas-Texas region, about 120 per cent. Increases at these rates can not be expected to continue. There are already indications in Eastern Ohio and Northern West Virginia that shipments will be checked by transportation difficulties on certain important roads.

Shipments in the Middle and Southern Appalachian regions averaged during the first half of the week about 10 per cent higher than the previous week. This was due to the large increase on Monday, after which on Tuesday and Wednesday shipments dropped off to less than the average for the preceding week and in some districts, to less than



shipments on corresponding days of that week. Shipments have declined most in the southernmost districts of West Virginia, in Eastern Kentucky, and Alabama. Mining in this region is suffering severely from transportation difficulties, and shipments are now at best 700,000 tons less per week than during June.

In Western Kentucky shipments on Monday will average about 15 per cent under the previous week, on account of transportation difficulties, and are below the rate attained prior to the shopmen's strike.

The Colorado output is declining on account of railroad difficulties. Other far western states show increased shipments.

Coal loading totaled 26,826 cars on Friday, September 1. This was a reduction of 2,201 cars compared with the preceding day, but 2,269 cars in excess of the average daily loadings for September last year, and 9,763 cars above the average daily loadings for August this year. The Eastern and Northwestern districts reported increases in the number of cars loaded with coal on Friday over the previous day, but small reductions were reported in coal loadings in the other districts compared with the day before.

Coal loadings on Saturday, September 2, totaled 25,157 cars. This was a decrease of 1,669 cars under the preceding day. Loadings on Saturday, however, are generally less than on other week days owing to a short day being observed at most mines. Coal shipments last Saturday, however, exceeded the daily average in September last year by 600 cars, and the daily average in August this year by 8,094 cars.

A total of 167,428 cars were loaded with coal during the week which ended on September 2. This was the largest number of cars loaded during any one week since the strike of miners began on April 1 last and also exceeded the preceding week by 49,616 cars.

#### Lake Movement of Coal

Details of the new program adopted for the expedition of the movement of coal to the upper Great Lakes region were given in a circular issued by the Federal Fuel Distributor as follows:

"Amendment No. 4 to Service Order No. 23 of the Interstate Commerce Commission transfers lake coal from Class 3 to Class 2 and covers all bituminous coal consigned to a pool, or pools, of lake cargo, or bunkerage coal, at any port on Lake Erie for trans-shipment by water to ports above Lake Erie. Pool coal will be consigned to the Ore & Coal Exchange at Lake Erie port, under the rules of the Ore & Coal Exchange, may not be so consigned until a permit has been issued by the Ore & Coal Exchange admitting the coal to the pools.

It is expected that since lake coal is in Class 2 priority of Amendment No. 4 to Service Order No. 23 transportation will be available to move a large part of the coal purchased by lake forwarders. However, if due to short car supply or other causes, the coal under purchase to the lakes is not forthcoming under Class 2 priority in quantities sufficient to meet the lake program it is expected that immediate steps will be taken to protect the deficiency in such movement. This deficiency protection will be effected by advancing from Class 2 into Class 1 enough of the lake tonnage purchased to produce the total tonnage which has been allotted for each week.

When it is ascertained by the joint representative of the Interstate Commerce Commission and the Federal Fuel Distributor at Cleveland how much additional coal it is necessary to move to lake under Class 1 priority in any given week, requests should be made by the lake forwarders through the Ore & Coal Exchange, properly supported by evidence of the purchase of the coal for the issuance of permits by the representative of the Interstate Commerce

Commission at Cleveland to grant Class 1 priority for specific tonnages from specific operations in sufficient amount to bring the total movement up to desired amount within the current capacity of the carriers and the Lake Erie docks to handle. Coal shipped under such permits must be shipped within 10 days from date thereof."

The new program was put in operation on Monday, September 4, and it was hoped that 1,000,000 tons of coal might be started lakeward this week. Loadings for the lakes during the last week were estimated at 800,000 tons. Owing to the uncertainty of weather conditions during the month of November, which might seriously hamper the trans-shipment of coal at lake ports, it is deemed advisable to push the lake movement with all possible dispatch for the next few weeks. B. S. Robertson, of the Interstate Commerce Commission, has been designated as the joint representative of that organization and the federal fuel distributor at Cleveland.

#### Car Service Orders

THE INTERSTATE COMMERCE COMMISSION on August 31 issued its Service Order 24, which directs all common carriers by railroad, west of the Mississippi river, to give priority and preference to the movement of food for human consumption, feed for live stock, perishable products, and fuel, and to the return of empty cars intended to be used for the transportation of those commodities.

A few days ago the commission granted an informal hearing to representatives from the Pacific Coast on their petition for preference and priority in the movement of empty refrigerator cars, primarily to take care of the fruit crop from that section.

This order is intended to insure the prompt movement of the commodities specified, and to expedite the movement of empty refrigerator, tank or other cars to originating territories.

When carriers find themselves currently unable promptly to transport all freight traffic offered them, the commission will expect the carriers to bring to its attention for appropriate action any instances which, in their opinion, are of such a character as to warrant any deviation from the general directions as to priority in movement.

#### Open Top Cars

On September 1 the commission also issued Amendment 5 to Service Order No. 23, which permits the use of open top cars 42 inches or less in height for the movement of commodities other than coal. In this connection Commissioner Aitchison wrote a letter to R. C. Marshall, who had filed a petition on behalf of the Associated General Contractors for modification of Service Order No. 23 in order to allow a greater use of open top cars for building materials. Commissioner Aitchison says that under Service Order No. 23 approximately 62,000 open top cars less than 36 inches in height were exempted from being preferentially loaded with coal and Amendment 5 will release approximately 34,000 additional open top cars from this preferential loading. The commission feels that this will to a considerable extent relieve the construction interests as well as others primarily dependent upon the use of open top cars for the movement of their commodities. This action on the part of the commission, he says, should not be taken as its final word on the subject, but with the present and necessary demands for coal it does not feel that it can consistently go further at this time. It will continue to keep in daily touch with the situation and as soon as it feels that the situation warrants, action will be taken to relax the service order. Meanwhile, it asks to be kept informed of the general situation and of any exigencies which might require special attention.

# Gulf Coast Lines Show Increasing Prosperity

System Serves as Distributor of Traffic to Gulf Ports—Is Realizing on Development in South Texas

THE NAME "GULF COAST LINES" is used to identify the railway system operated by the New Orleans, Texas & Mexico Railway Company and the latter's subsidiary companies, extending from New Orleans along the coast of the Gulf of Mexico to the Mexican border at Brownsville, Tex. The system was formerly a part of the old St. Louis & San Francisco organization and received a share of the unpleasant publicity surrounding the sins of the old Frisco management which culminated in the receivership in 1913. The Gulf Coast Lines were separated from the Frisco system in the receivership. The system—or rather the parent New Orleans, Texas & Mexico—was

vestment. The parent New Orleans, Texas & Mexico paid an initial dividend on its common stock in December, 1920. In 1921 it paid 6 per cent and it is now on a 6 per cent basis.

## A Number of Related Corporations

The Gulf Coast Lines consist of a number of related corporate organizations controlled by the parent New Orleans, Texas & Mexico through stock ownership or lease. An additional feature is the proportionately large mileage of line operated under trackage rights, a factor of special importance because it is in this manner that the lines of the various individual companies are brought together to form a through route. The make-up of the system is in brief as follows:

The New Orleans, Texas & Mexico operates the lines in the state of Louisiana, including that part of the main line between Anchorage (opposite Baton Rouge) and DeQuincy. Access to New Orleans is secured by a special traffic and operating agreement with the Yazoo & Mississippi Valley, under which the latter company handles the traffic between Baton Rouge and the terminals at New Orleans on schedules, rates and practices prescribed by the New Orleans, Texas & Mexico in the same manner as if the latter operated its own line into New Orleans.

The Beaumont, Sour Lake & Western is controlled by ownership of all its capital stock. Its line is from Beaumont, Tex., to the outskirts of Houston and connection with the lines of the parent company is obtained by trackage rights on the Kansas City Southern between DeQuincy and Beaumont.

The St. Louis, Brownsville & Mexico, similarly controlled by ownership of all of its capital stock, owns the line from Alcoa, Tex., south of Houston, to Brownsville with an important branch up the Rio Grande valley. The Gulf Coast Lines operate into Houston over the Houston Belt & Terminal, a half interest in which is owned by the St. L., B. & M. and the B. S. L. & W. Between Houston and Alcoa trackage rights are used over the line of the Gulf, Colorado & Santa Fe.

The Orange & Northwestern, controlled by ownership of all its capital stock, operates a line between Orange, Tex., and Newton, Tex. The Louisiana Southern is a leased line, the mileage of which is south of New Orleans.

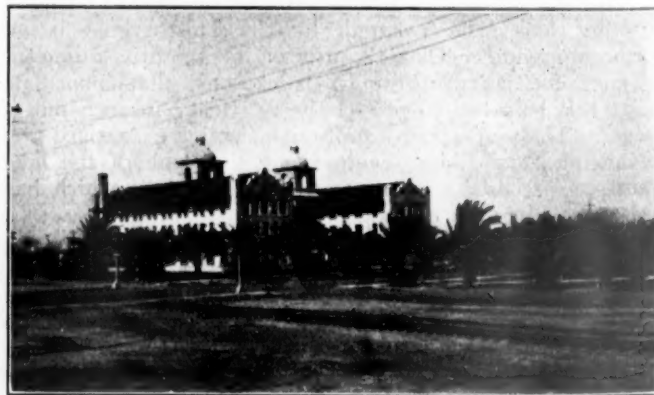
The mileage as thus outlined, including branches, totals 1,015 of which 823 is owned, 99 is trackage rights and 93



The Gulf Coast Lines

reorganized, effective March 1, 1916, and has been under its present management since that time, except, of course, as concerns the federal control period.

Under the present management the history of the system has been one of gradually increasing prosperity, the extent of which would seem sufficient, it is believed, to justify the paying of rather more attention to the property than has on the whole been paid to it. The signs of this prosperity may be bodied in the statement that the Gulf Coast Lines earned for the government considerably more than their standard return. In the last four months of 1920, two of the constituent companies—the St. Louis, Brownsville & Mexico and the Beaumont, Sour Lake & Western—were included in the country's small list of roads which earned net railway operating income of more than 6 per cent upon their in-



Views on the Gulf Coast Lines in Southern Texas



represents the special arrangement with the Y. & M. V. In Gulf Coast Lines reports of operating statistics the latter 93 miles is not included and the statistics are figured on a mileage of 922.

The foregoing analysis does not, however, include the entire system. Another unit is the separately operated New Iberia & Northern, and a second, the San Benito & Rio Grande Valley, the earnings of both of which lines are reported separately.

### Some Leading Features

The fact that the Gulf Coast Lines serve the coastal plain bordering the Gulf of Mexico is reflected in several interesting and important characteristics. The first is that the territory is a rich one which, further, has probably only seen the beginning of its ultimate development agriculturally or industrially. A second feature is that the system's lines cross at right angles the lines of nearly all the carriers which serve the Gulf ports. This does not mean that the Gulf Coast Lines do not meet competition from these other lines; as a matter of fact, they meet a great deal of competition. It does mean, however, that the Gulf Coast Lines are much in the nature of a distributing facility. Most of the various other lines serve individual ports. The Gulf Coast Lines have access in one way or another to them all, and this is one of the most important factors in the value of the system's location. The third important factor is that serving a comparatively flat country, as it does, the Gulf Coast Lines have no difficult grades. Its maximum grade is but 0.3 per cent. The result is a great assistance to economical operation—comparatively heavy train loading being secured with the use of small motive power units. It might be expected that a line lying so near the Gulf coast would be subjected to damage from the severe storms which are somewhat too frequent. It happens, however, that the lines are far enough from the coast to be given sufficient protection. A real handicap is the peculiar character of some of the rivers

The traffic carried was divided in 1921 and 1920 as follows:

Products of	1921		1920	
	Originating on line	Received from connections	Originating on line	Received from connections
Agriculture .....	301,073	477,993	268,921	511,128
Animals .....	27,663	11,712	32,699	22,339
Mines .....	225,622	609,001	271,919	964,589
Forests .....	322,210	226,654	420,356	456,252
Fuellers and misc. ....	174,270	451,469	141,585	567,690
Mdse. ....	47,406	39,711	60,604	56,835
Total .....	1,098,244	1,816,540	1,196,084	2,578,833
Grand total .....	2,914,784		3,774,917	

### Agricultural Possibilities

The territory served by the Gulf Coast Lines is characterized primarily by its possibilities from the standpoint of agriculture. The road, it will be noted from the foregoing figures, originates also a large tonnage of products of forests. This traffic is derived from the area in eastern Texas and western Louisiana. There is a large area devoted to grazing, notably along the east shore of Texas. The cattle industry has been especially hard hit in the past two or three years; the herds are at present unusually large but the live stock tonnage has, in consequence, been unusually small. In normal times the cattle move to Fort Worth, being turned over to connecting carriers at Houston or other points. The agricultural territory is found in central Louisiana, west of Baton Rouge, and to a certain extent, at various other points along the greater part of the system's mileage. Some of the land remains to be brought into production either through irrigation or through drainage. There is a large area, notably in southern Texas, which has been held from cultivation because of the hesitancy of some of the owners to break up their large holdings for this purpose.

### The Rio Grande Valley

The most striking development, however, is that which has been taking place in the Rio Grande valley in the extreme

### GULF COAST LINES

Year	Average mileage operated	Revenue freight tons.	Net ton miles*	Total railway operating revenue	Total railway operating expenses	Net railway operating revenue	Net railway operating income	Operating ratio	Net tons per train*
1916	959	2,839,628	369,555,664	\$6,410,377	\$4,321,277	\$2,089,100	\$1,653,119	67.41	410
1917	920	3,555,975	413,433,820	6,661,229	4,193,326	2,467,903	2,082,971	62.95	467
1918	920	2,619,393	405,333,134	8,013,713	5,776,515	2,237,199	1,932,868	71.90	501
1919	920	2,828,399	476,062,390	9,206,554	7,347,019	1,859,535	1,202,738	79.42	567
1920	922	3,774,917	723,557,275	13,435,246	11,129,562	2,305,683	1,686,956	82.84	635
1921	922	2,914,784	533,734,186	11,090,101	8,215,473	2,874,628	2,141,708	74.08	676
1922, 1st 6 mos.	922	1,988,987	259,527,000	5,102,678	3,527,300	1,575,378	1,243,209	69.13	625

\*Including non-revenue freight.

†U. S. Railroad Administration 1918, 1919, and Jan. and Feb., 1920.

crossed, whereby these streams are narrow rivulets at dry seasons of the year and raging floods at other times. The Gulf Coast Lines, however, do not seem to have suffered as much on this score as some of the other lines serving this territory.

### A Distributing Facility

The Gulf Coast Lines receive from connections considerably more traffic than they originate. In 1921, for instance, of a total of 2,914,784 revenue tons, 1,816,540 was received from connections. Some of this traffic received from connections is, of course, that consigned to Gulf Coast Lines' local stations. A larger proportion would be that received from the north and south lines for movement to other ports than those they themselves serve. Tonnage of this kind would be that, for example, delivered by the Kansas City Southern at DeQuincy, La., for delivery to New Orleans, etc. The density of traffic on the line east of Houston is greater than on that west. The movement is predominantly eastbound, which conditions show the importance of the traffic moving to New Orleans and received from the various connecting lines.

south, or the area lying along the main line to Brownsville and the branch from Harlingen to Sam Fordyce. The climate in this particular section is dry and crops can be raised only with irrigation. There have been a number of irrigation developments of imposing size, the purpose of which has been to bring the water up from the Rio Grande and distribute it to the higher levels bordering the river on the Texas side. The valley has a rich soil and with a proper water supply it has been able to derive advantage from the fact that it is able—being so far south—to bring vegetables into the northern markets one or two months before any other sizeable area in the country has begun to secure its crops. Thus the Gulf Coast Lines is called upon as early as January to move a large tonnage of cabbage, spinach, beets, etc., to northern markets such as Kansas City, Chicago and even New York. Further than that, it was recently discovered that the valley was especially suitable for citrus fruits. The visitor in the valley will see many groves—of from 5 to 25 acres, as a rule—of young orange, grape fruit or lemon trees. The fruit is of high grade and should become an increasingly important factor as the progress already started is continued. The territory in the Rio

Grande valley and in south Texas generally is building up rapidly and should become an increasingly valuable asset in Gulf Coast Lines operations.

At Brownsville, the Gulf Coast Lines connect with the line of the National Railways of Mexico from Matamoros to Monterey. The route into Mexico via Brownsville has possibilities which at present are not being realized because of Mexico's unstable condition. The Gulf Coast Lines operate through Pullman cars from Houston to Mexico City, Monterrey and Tampico and there is some interchange of freight.

#### Revenue Train Load of 628 Tons

The Gulf Coast Lines average revenue train load of 628 tons in 1921 was high considering the character of the traffic handled. It was, in fact, one of the highest figures reported by the roads in the southwestern region. It reflects primarily the fact that the worst grades on the Gulf Coast Lines are only of 0.3 per cent. The road uses comparatively small locomotives. Its most important power includes 5 Russian decapods and 20 Consolidations. The average tractive effort of its total of 49 road freight locomotives is



One of the Gulf Coast Lines River Crossings

only 33,347 lb. Smaller locomotives are used on the other lines south of Houston. East of Houston the method of operation is to start trains from that point with 2,500 tons and to pick up to 3,500 at DeQuincy.

The road has 85-lb. rail on its busier eastern end, although there is about 65 miles of 75-lb. rail still in track. West of Houston there is 75 or 80-lb. rail except to the south, where there is considerable mileage of 65-lb. rail. Shell and gravel ballast is used although there is some non-ballasted track in the south. Formerly cypress ties were used without tie plates. More recently the road is putting in treated pine and red oak ties. The system maintains shops at Kingsville, Tex. These have recently received an amount of new equipment and machinery but they are otherwise of a mediocre character.

In 1921 the Gulf Coast Lines had a traffic density of 538,573 revenue ton-miles per mile of line. In 1920 the figure was 725,879. It has already been noted that the traffic density is much greater east of Houston than west. The road secures an average haul on its revenue freight of 170 miles and its earnings per ton-mile in 1921 were 1.64 cents. Revenue car load in 1921 was 23.32 tons.

The Gulf Coast Lines in 1921 had a net railway operating income of \$2,141,708. Excluding an item of \$388,246 representing lap-overs from the guaranty period of 1920, the figure would have been \$2,529,954. The size of these figures is indicated by the fact that the property had a standard return of only \$1,061,001. It is interesting to observe that the latter figure has been exceeded in every year since 1916. In 1917 the property had a net railway operating income of \$2,082,971; in 1918, of \$1,932,868; in

1919, of \$1,202,738, and in 1920, totaling \$1,686,956.

The 1921 net was secured with a decrease as compared with 1920 of 13.1 per cent in freight revenues and of 17.5 per cent in total revenues. The decrease in operating expenses, however, was 26.2 per cent. In 1921 the property had an operating ratio of 74.08 per cent as compared with 82.84 in 1920. The 1921 ratio of transportation expenses to total revenues was 33.33; the 1920 ratio, 35.36 per cent.

#### Corporate Income Account Figures

The 1921 figure of net railway operating income, \$2,529,954—excluding lap-over items from the 1920 guaranty period—was after the deduction of \$32,441, debit balance for equipment rentals, and of \$252,197, debit balance for joint facility rents. In 1920 the debit equipment rents balance was \$582,126 and the debit joint facility rent balance, \$320,694. That the Gulf Coast Lines should pay out more than they receive for freight car hire is due to its being a terminal road and it also reflects the cost of securing cars for the early perishable movement from the Rio Grande valley and other agricultural areas. Car supply would naturally be expected to be a problem under the circumstances. The debit joint facility balances indicate the cost to the Gulf Coast Lines for its large mileage of trackage rights.

The Gulf Coast Lines, as has already been noted, included in the 1921 income account a charge of \$388,246, representing lap-overs from the guaranty period. After the deduction of this charge, the net railway operating income reported for the year was \$2,141,708. Non-operating income was reported as \$861,946, including an item of \$721,033 "balance of rental received from the United States government for 1918, 1919 and 1920." The gross income was \$3,391,901. The fixed charges were \$1,190,387, of which \$1,114,390 was interest on funded debt. The road used \$890,848 for its 6 per cent dividends; \$323,107 was appropriated for investment in physical property and the balance carried to profit and loss was \$987,559 or, excluding the guaranty period lap-over item mentioned, it was \$599,312. In 1920 the road carried to profit and loss a credit balance of \$381,528 after appropriating \$297,370 for dividends, and \$694,210 for investment in physical property.

Just now, the Gulf Coast Lines are showing better figures than were shown in 1921. For the first six months of this year the property had a net railway operating income of \$1,243,209, which total was \$476,490 better than the figure for the first six months of 1921. This would seem to indicate that the 6 per cent dividends should again be handily earned this year as they were in 1921.



Forty-One 40-Ton Box Cars Rebuilt At North Little Rock Shops of the Missouri Pacific During August—Showing How Even Heavy Repair Work Is Progressing in Spite of Strike



## General News Department

**W. H. Woodin**, president of the American Car & Foundry Company, New York, was appointed fuel administrator of the state of New York on September 5 by Governor Miller under the act of the extraordinary session of the Legislature. Mr. Woodin will serve without compensation and will succeed the Governor's advisory coal commission.

The Canadian National will soon inaugurate freight and passenger service on its branch line between Victoria, B. C., and Sooke Harbor. This line, which was originally constructed to tap large timber territory, has not been in operation since early in the World war. Plans are now under way for its reconstruction and it is expected that gasoline-driven passenger cars will be placed in operation by the last of this month.

The Engineering Institute of Canada held a general professional meeting at Winnipeg, Man., on September 5-7, with headquarters at the Fort Garry Hotel. The program on Tuesday included descriptions of the Winnipeg hydro-electric plant and the Manitoba Power Company's development at Great Falls. On the following day these plants were visited by special train. On Thursday papers were presented on the construction of the Moncton yard and engine facilities of the Canadian National by S. B. Wass and on automatic grain car unloaders for the Canadian National Railways at Port Arthur by Fred Newell.

The Pennsylvania Railroad and its employees took a prominent part in Atlantic City's annual pageant, this week, being under charge of the First Aid corps of the Atlantic division. The railroad company's police, leading, were followed by the bearers of the First Aid corps banner, the marshal and his aids, the Pennsylvania Railroad band of 40 pieces, from Philadelphia, and a float in the form of a huge rolling chair, pushed by six red-cap porters. The top of the float represented the upper portion of a day coach, on which were seated seven girls, all employees of the Atlantic division. The railroad was represented also by a male chorus of 45 voices, made up of employees of the car service department at Philadelphia, the Altoona band of 75 pieces, and the Altoona shops glee club, 75 voices. The Pavonia shops, near Camden, N. J., were closed all day September 7, and for the benefit of the shopmen and their families, a special train was run from Camden to Atlantic City and return. For the Altoona employees and their families, a special night train was run, leaving Altoona on September 6.

### Roadmasters Postpone Convention

Owing to the unsettled conditions on the railways and the special demands which are being made upon the officers of the maintenance of way department, the executive committees of the Roadmasters and Maintenance of Way Association and of the Track Supply Association decided at a meeting held in Chicago on September 3 to postpone the convention and exhibit from September 19-21 to November 21-23. The convention will be held at the Hotel Statler, Cleveland.

### New York State Opens Grain Barge Terminal

The New York State grain elevator at Gowanus Bay, Brooklyn, N. Y., is now ready for operation and receives grain from barges and delivers to barges or lighters. The opening of this State canal elevator was celebrated at the Gowanus Bay Terminal on the afternoon of September 1, 4,000 invitations having been sent out from the Department of Public Works. The principal speakers were Nathan L. Miller, Governor of New York, and Julius H. Barnes, President of the United States Chamber of Commerce. Mr. Barnes is one of the largest shippers of grain in the country, and operates a fleet of modern vessels on the canal. The elevator occupies a space of about

430 ft. long by 70 ft. wide, facing on the Henry Street slip. Water alongside the pier has been dredged to a depth of about 35 ft. so that any steamer arriving in New York can be accommodated. The elevator is of steel and concrete. It has 18 rows of bins, three in a row, making 54 bins, 20 ft. in diameter, with a capacity of 26,000 bushels each; 34 interspace bins and 38 outer bins. All the bins are 95 ft. deep and the total capacity is over 2,000,000 bushels.

### Safety on the Pennsylvania

The Pennsylvania System operated throughout the year ended May 31, 1922, without a passenger being killed in train accident. The number of passengers carried totaled 152,000,000, approximately one-seventh of the passenger business of the railroads of the country. The Pennsylvania System embraces 27,000 miles of track, 271,000 freight cars, 8,000 passenger cars and 8,000 locomotives. The management will continue to do its utmost to maintain its record for safety, and, in turn, all persons who drive automobiles are earnestly requested to co-operate in the Careful Crossing Campaign by observing the following precautions before crossing tracks: 1. Slow down. 2. Shift into lower gear to prevent stalling on tracks. 3. Look in both directions. 4. Listen. 5. Do not try to beat a train over a crossing. Stop if train is approaching. 6. After a train has passed make sure that no others are approaching in either direction. 7. Be doubly careful at night and on strange roads.

### Study Marine Borers in New York Harbor

The investigation of marine borers, which had its inception with the organization of the committee to study conditions in San Francisco bay, has been extended to New York harbor and adjacent waters under the general supervision of the National Research Council and a special committee of 40 members directly interested in the metropolitan area. This includes representation from the United States Army, the Bureau of Yards and Docks of the Navy, the Lighthouse Service and several departments of the City of New York, as well as representatives of the engineering departments of several railroads. The investigation covers the collecting of data, by means of a questionnaire, concerning the experiences of all owners of dock property, the placing and study of test pieces in the waters at various points, a biological survey and studies of water temperature, salinity, pollution, etc. The investigations made thus far have disclosed the presence of live toredos and limnoria at a number of locations. The study is being supported by contributions of labor and funds from various properties interested and is carried on in co-operation with studies made by scientific departments of the federal government, the railroads, universities, etc.

### Southern Pacific Asks Modification

#### of Train Control Order

The Southern Pacific has filed a petition with the Interstate Commerce Commission for a modification of its automatic train control order, which requires installation on a full passenger division between Oakland, Calif., and Sacramento. The company asks to substitute for a part of this mileage that part of its main line between Oakland and Tracy via Port Costa, which is of substantially the same mileage and embraces 24 miles of the location designated by the commission between Oakland and Port Costa. At that point the lines diverge, one to Sacramento and the other through Tracy to Los Angeles. The location designated in the commission's order is entirely double track. The proposed substitute would consist of 24 miles of double track from Oakland to Port Costa and 57 miles of single track from Port Costa to Tracy. The petition states that the problems in applying the automatic train control to single track are far more complex than in the case of double track and the company desires to ex-

periment on both. The substitute location would include the busiest piece of double track on its line, and the combination of double track and single track, in the opinion of the company, would constitute the most useful test.

### Ticket Scalping Prevalent on Pacific Coast

Professional ticket scalpers have become so numerous in California this summer because of the greatly reduced fares that the railroads have been forced to take drastic legal measure to rid the state of these unlawful agents. H. A. Koach of the Railway Ticket Protective Bureau with headquarters at Chicago, is now in Los Angeles in charge of this work. Three arrests were made last week and it is said that a number more are contemplated. Ticket scalpers, it appears, flourish in California better than elsewhere. They are to be found, it is said, profiting to the extent of \$20 to \$150 per day through their purchase of the return portions of tickets from the tourists who decide to remain on the Coast. Men and women alike are operating in this business.

Coastwide newspapers are co-operating with Mr. Koach in refusing to publish "blind advertisements" for the scalpers and, at the same time, are warning their readers that by purchasing fares in the illegal way they are violating the Interstate Commerce Act, and subjecting themselves to fine and imprisonment. Many innocent people this summer have been forced to surrender their scalped tickets and sustain the loss of that fare through their lack of knowledge of the law in this connection.

### Wage Statistics for June

According to the Interstate Commerce Commission's monthly summary of wage statistics the number of employees reported by Class I railroads for the month of June, 1922, shows an increase of 57,186, or 3.5 percent, as compared with the number reported for the preceding month. This increase was distributed by groups as follows:

Executives, officials, and staff assistants.....	59
Professional, clerical, and general.....	1,720
Maintenance of way and structures.....	23,893
Maintenance of equipment and stores.....	15,818
Transportation (other than train, engine, and yard).....	4,866
Transportation (yardmasters, switch tenders, and hostlers).....	292
Transportation (train and engine service).....	10,538
Net increase.....	57,186

A comparison of the number of employees and their compensation, by months, for the period covered by the new classification follows:

Month.	Number of employees.	Total compensation.
July, 1921.....	1,634,872	\$214,339,385
August, 1921 <sup>1</sup> .....	1,679,927	227,745,895
September, 1921 <sup>1</sup> .....	1,718,330	223,972,822
October, 1921 <sup>1</sup> .....	1,754,136	237,602,959
November, 1921 <sup>1</sup> .....	1,732,353	225,304,006
December, 1921 <sup>1</sup> .....	1,637,151	214,921,396
January, 1922 <sup>1</sup> .....	1,552,014	205,178,639
February, 1922 <sup>1</sup> .....	1,545,040	194,523,427
March, 1922 <sup>1</sup> .....	1,570,158	216,704,408
April, 1922.....	1,578,133	203,413,071
May, 1922.....	1,628,228	216,672,028
June, 1922.....	1,685,414	222,932,689

<sup>1</sup> Excludes Detroit, Toledo & Ironton.

### Cape Charles Car Ferry Handles Record Traffic

The Pennsylvania Railroad reports that its car ferry between Norfolk, Va., and Cape Charles, 36 miles long, across the lower Chesapeake Bay, carried, in August, a total of 27,943 cars, the heaviest traffic ever handled over the Cape Charles route, and, it is believed, the greatest record for a freight car ferry of equal length anywhere in the world. The average movement was 901 cars a day. The high record north-bound was made on August 20 (Sunday) when 620 cars were ferried from Norfolk to Cape Charles; on August 13th, there were 620 cars ferried, north-bound. The previous north-bound high record was on July 13, 1916, when 613 cars were carried across.

The high record south-bound was made on August 4th, when 592 cars were ferried from Cape Charles to Norfolk. The previous high record south-bound was on June 19, 1917, when 527 cars were carried, when 11 barges were in use. They averaged a little over two trips each and carried an average of 27 cars a trip. The average lay-over at Cape

Charles for unloading and loading was 50½ minutes. In the first eight months of the present year this ferry has carried an average of 634 cars daily as compared with 519 cars daily for the eight months last year; 534 cars in 1920, and 601 in 1919.

### Electric Trains May Be Run Over M. K. & T. Line

A contract is now in process of negotiation between the Missouri, Kansas & Texas and electric power interests which if consummated will furnish electric passenger service between Dallas and Denton, Texas, a distance of 48 miles.

It is proposed that the electrical interests shall lease the track-age rights and that electrification of the line will in no way interfere with the operation of freight trains on the line, nor with the operation of through passenger trains. Z. G. Hopkins, manager, Department of Public Relations, M. K. & T., states that at the present time no change is contemplated in the operation of M. K. & T. trains.

C. E. Calder, president of the Texas Power & Light Company and of the Dallas Power & Light Company, stated that a contract with the railroad for electrification would comply with an agreement, made with the city of Dallas for the construction of an interurban line at least 30 miles in length which the Dallas Railway is under bond to build in order to fulfil the terms of an agreement entered into in connection with the granting of the franchises to the Strickland-Hobson interests in 1917. Electrification of the M. K. & T. from Dallas to Denton, according to Mr. Calder, will be an economic proposition from the standpoint of the railroad, as well as the electrical interests.

The railroad now operates six passenger trains on this line, two of which are night trains. It is the intention of the power company to run electric trains hourly. The cost of electrifying has been estimated at between \$800,000 and \$1,000,000.

### British Columbia Advised to Scrap Its Railway

The above is the heading, in Canadian newspapers, of a press despatch from Victoria, B. C., dated September 1, summarizing a report made for the Provincial Government by a special investigator, J. B. Sullivan. We quote, in part:

"Unless the people of British Columbia are prepared to continue paying from two million to two and a half million dollars a year for ten years on the investment already made in the Pacific Great Eastern Railway, the whole system should be abandoned, says Mr. Sullivan. He strongly advises against extension of the line and urges abandonment of the section from Quesnel [the present northern terminus, 360 miles from Vancouver] to Prince George. He recommends abandonment of the line from Squamish to Clinton, 166 miles, and using the salvage money to build a line from Clinton to Ashcroft.

"Mr. Sullivan dismisses the possibility of handing the road over to a private concern as impracticable. None of the large companies would take it. The Government can do as many other railroads are doing—abandon the operation of steam trains for passengers and replace them by gas-driven motor cars. Other recommendations are: Cancellation of mail contracts on that section of the line where snow trouble occurs in the winter; passenger and freight rates must be raised to all the traffic will bear.

"W. P. Hinton and Col. J. S. Dennis, who also made an exhaustive investigation of the railway, made reports for the Government which, in the main, agree with Mr. Sullivan's recommendations."

### Locomotive Loadings for Railway Bridges

A paper entitled "Locomotive Loadings for Railway Bridges" was presented by D. B. Steinman, consulting engineer and professor in charge of civil and mechanical engineering, College of the City of New York, at the regular meeting of the American Society of Civil Engineers on September 6. With the aid of lantern slides Mr. Steinman discussed fully the methods in working out a proposed new loading system based on the stress-producing effects of modern heavy locomotives. The discussion of the paper was generally favorable to the plan developed, the main objections cited being that the Cooper loading was, and had been for a long time, in active use, that there was an immense amount of tables, diagrams, calculations, etc., on hand based



on that loading and that all engineers connected with the problem were not of the opinion that a change was entirely necessary or advisable. C. E. Fowler, consulting engineer, New York, stated that the first thing to be done was to convince the A. R. E. A. that it wanted to co-operate in the matter of securing a substitute for the Cooper loading. The next step to be taken up, since the live load factor must be considered as important, was the standardization of locomotives at least along the line of axle spacings and the lightening of parts and farther if possible in order to reduce impact, etc., a plan now being followed by some roads to simplify the problem of the bridge engineer. Locomotive builders and others interested must work along similar lines before a composite loading can be secured that will last. He added that any plan developed should be made to harmonize with the ideas of the A. R. E. A. and the Engineering Institute of Canada. C. F. Loweth, chief engineer, Chicago, Milwaukee & St. Paul, stated that if exactness is to be secured all factors entering into bridge design must be considered thoroughly and among these of prime importance was the speed factor. In the past, designs were made on the basis of the heaviest locomotives but developments continued to upset these ideas. Locomotives have become heavier and heavier and the trend may continue. It also might reverse itself since transportation methods are also showing a tendency to change. There is also to be considered, the possible future use of the electric locomotive which is seldom double-headed and which generally gives a lesser impact.

### Respirators and Masks for Tunnels and Industrial Uses

The development of a pocket canister or respirator which will largely alleviate the discomfort to which engine crews are subjected from the presence of sulphurous locomotive smoke when passing through railroad tunnels is announced by the United States Bureau of Mines in technical paper 292 by A. C. Fieldner and S. P. Kinney. The canisters, which fit conveniently into a coat pocket, are filled with an absorbent mixture of activated charcoal and soda lime, and contain filters of Turkish toweling. These small smoke respirators have had the hearty approval of the men who have used them and retain their effectiveness for months. They may be cheaply made and are a great improvement over the sponge respirators and handkerchiefs and towels now used by engineers and firemen when passing through unventilated tunnels.

The Bureau of Mines has also conducted tests to determine the efficacy of the army gas masks for use on locomotives in railroad tunnels. It was found that army gas masks, having canisters filled with charcoal and soda lime mixture and with a cotton pad filter, gave good protection against the smoke and irritant gases. One constituent of smoke, carbon monoxide, which is poisonous but tasteless and odorless, penetrates these canisters, but experience has proven and analyses taken during the tests showed that on moving trains the amount of carbon monoxide present was not enough to be dangerous.

Respirators of the "pig-snout" type containing wet sponges afford some relief by cooling the gases and absorbing some of the irritating constituents of smoke. Protection is not complete and most of the men will not bother with such respirators, preferring to tie handkerchiefs over the nose and mouth.

The bureau has sought to impress on the public the limitations of the Army gas mask and at the same time to develop special types of masks suitable for different industries or occupations, that will serve to protect the wearer from the gas hazards encountered in a particular field of work. The bureau has also done work on a universal mask that would serve to protect the wearer against all of the gases in air commonly met. A light weight form of this universal mask has been developed for the use of city firemen.

The charcoal and soda-lime filled canisters protect against certain acid gases and organic vapors. They should not be used in gasoline vapor; they afford no protection against ammonia, and none whatever against the carbon monoxide which may be found in products of combustion, and in producer gas, coal gas, water gas, and blast-furnace gas. The pocket canisters afford protection against the coarse smoke particles of locomotive smoke; but give very little protection against wood smoke, very fine dusts, and fumes or mists such as those of tin tetrachloride, silicon tetrachloride, or sulphur trioxide.

## Commission and Court News

### Interstate Commerce Commission

The commission has suspended from September 5 until January 3, 1923, the operation of schedules contained in a supplement to Agent F. A. Leland's tariff which propose to make inapplicable through rates on fresh fruits and vegetables from various producing points in Texas to northern and eastern points when routed from Houston to St. Louis via International & Great Northern, Texas & Pacific and Missouri Pacific.

### Court News

#### Omission of Statutory Signals Bars Recovery

##### From Negligent Truck Owner at Crossing

The Circuit Court of Appeals, Sixth Circuit, holds that the failure to comply with the statutory requirements of sounding whistle and ringing bell, Ohio Code §§ 8853, 8856, is negligence per se, barring recovery for damage to railroad equipment by collision with defendant's motor truck at a crossing.—*Norfolk & Western v. Norton Iron Works*, 279 Fed. 32.

#### Warning to Protect Goods Against Flood

The Michigan Supreme Court holds that where the carrier has warning of an oncoming flood, ample time after such warning to protect the shipment, and does not take reasonable precautions to protect it, he is not exonerated from liability on the principles laid down in what it calls the "delay" cases which were decided on the theory that the carrier could not reasonably have foreseen the danger, and that therefore the delay was not the proximate cause. In this case the goods had been placed in the freight-house after arrival at destination. It was held the carrier had ample warning of an oncoming flood to have protected the goods.—*Ithaca Roller Mills v. Ann Arbor* (Mich.), 186 N. W. 516.

#### Excessive Verdict Induced by Erroneous Instruction

For an injury causing the amputation, between the wrist and elbow, of the left arm of plaintiff, a brakeman, 30 years old, earning \$200 a month, the Mississippi Supreme Court holds a verdict for \$25,000 to be grossly excessive, and probably induced by an instruction granted the plaintiff which charged the jury that it might return a verdict in his favor "if it believed certain matters therein set forth to be true 'not to exceed \$50,000, the amount sued for.' The jury should not have been so instructed, for \$50,000 is more than double the amount for which a verdict should be upheld." The cause was reversed, on the question of damages only, unless the plaintiff entered a remittitur of \$7,000.—*Alabama & Vicksburg v. Dennis* (Miss.), 91 So. 4.

#### Actions for Injury to Interstate Shipments

##### Removable from State to Federal Courts

The Federal District Court for the Southern District of Texas, following *G. H. & S. A. v. Wallace*, 223 U. S. 481, 32 Sup. Ct. 205, holds that, while suits arising out of interstate shipments may be cognizable in the state court, they are also removable to the federal district court as matters of federal instance, when the jurisdictional amount (\$3,000, exclusive of interest and costs) is involved. The action was under the Carmack Amendment for damage to goods in interstate transportation.—*Nelms v. Davis*, 277 Fed. 982.

This rule applies though the whole journey was made over the lines of a single carrier.—*Nelms v. Davis*, 277 Fed. 987.

THE FLORIDA EAST COAST has established an independent city ticket office in Jacksonville, Fla., at 231 West Forsyth street, and has withdrawn from the joint ticket office.

## Foreign Railway News

### Hope for the Orient in Mexico Seen in Contemplated Purchase by British

The British interests which own the Mexico Northwestern Railroad are negotiating for the purchase of the concession and that part of the Kansas City, Mexico & Orient Railroad which is situated in Mexico. It is stated that the transaction will be more in the nature of a merger of the two interests than an outright purchase. One completed link of the Kansas City, Mexico & Orient connects with the Mexican Northwestern at Chihuahua, and another connects with it at Minaca. If the deal is consummated it is planned to make it the through line across Mexico that was contemplated in the original plans. Along the route west of Minaca are a number of rich mining camps which are now beginning to show activity after several years stagnation. It is reported that the ore traffic alone would justify the building of the road.

### South African Railways Ask Bids on Power Plant Equipment

LONDON.

Tenders are invited for the supply and erection in South Africa in connection with the electrification of the South African Railways and for use in the Maritzburg-Glencoe power house, of the undermentioned plant: coal handling plant, ash handling plant and circulating water plant. Specifications, blue prints and forms of tender for each of the above sections may be obtained from the office of the High Commissioner for the Union of South Africa, Trafalgar Square, London, W. C. 2 England. The charge for each specification is £5:5:0 for the first copy and £2:2:0 each for any further copies. Sums paid for any number of each specification up to three will be refunded on receipt of bona-fide tenders. Sealed tenders are to be addressed to the Secretary, Office of the High Commissioner for the Union of South Africa, Trafalgar Square, London, England, and to be delivered in duplicate not later than noon on Wednesday, October 18, 1922.

### French Railways Show Improvement in 1922

Since the enactment of the French transportation law of 1921 there has, according to Economist Consul Westcott, Paris, been a widespread interest in the results of this legislation. For the first six months of 1922, according to data submitted by the Minister of Public Works, there has been a marked improvement in French railway finances, equipment, and safety of operation.

Improvement in the finances of the six trunk-line railways of France is indicated by an uninterrupted decrease in operating deficits since 1919. In 1920 that deficit approximated 3,000,000,000 francs; in 1921 it declined by 33 per cent to about 2,000,000,000 francs; and at the close of 1922 it will be further reduced by a probable 50 per cent to an estimated 1,000,000,000 francs. During the first six months of 1922 operating expenses decreased and receipts increased; the decline in the resulting operating ratio indicated increased operating efficiency in all departments. From January 1 to July 1, 1922, receipts were 200,000,000 francs greater than for the corresponding period of 1921. Receipts on the Nord and Est lines, traversing the devastated regions, were 40,000,000 francs greater than during the preceding half year. It is estimated that on December 31, 1922, total receipts of all roads will be 1,000,000,000 francs in excess of the 1921 operating income.

There has been consistent improvement in the operating equipment of all roads since the war. In July, 1914, rolling stock in poor condition and not used included 1,700 locomotives, 4,500 passenger coaches, and 15,000 freight cars; in December, 1919, this class of locomotives numbered 3,418, passenger coaches 13,800, and freight cars 59,300; by June, 1922, rolling stock out of commission for repairs had been reduced to 2,717 locomotives, 7,764 passenger coaches, and 49,134 freight cars.

Higher efficiency in repair work since the war, with resulting decrease in rolling stock out of commission, has been due mainly to the policy of having repair work done under contract by the

machine shops of the country. Before the war such repairs were made in shops of the railway companies. During June, 1922, private corporations thoroughly overhauled 103 locomotives, 783 passenger coaches, and 10,220 freight cars. They did the work in 20 per cent less time and at a lower cost.

Safety of passengers and security of freight carried are the paramount considerations of the entire French railway system. That security is further insured through close supervision of the roads by the Railway Administration under direction of the Minister of Public Works. Two improvements now being introduced on all lines are important controlling factors in operating safety: (1) The "crocodile," an electrical apparatus installed in the locomotive cab, which automatically registers visually and audibly the semaphore signals along the line, thereby reducing to a minimum any possible failure by the engineer to observe the signal; (2) electric lighting of all passenger cars.

Precautionary measures already introduced have resulted in a marked decrease in the number of railway accidents and casualties. In 1913, when the various lines carried 541,342,165 passengers, there were 142 accidents, with 60 persons killed and 413 injured. In 1918, with about the same number of passengers carried, there were 379 killed and 1,435 injured. In 1921, with 665,000,000 passengers carried, there were 72 accidents, 137 killed, and 656 injured. During the first six months of 1922, with 335,000,000 passengers, 20 were killed and 166 injured.

### Three Killed and Many Injured in British Railway Accident

On the morning of August 21 three persons were killed and 59 injured in an accident which occurred on the South Eastern & Chatham Railway at Milton Range, a "halt" (i. e. an unimportant station) near Gravesend, England. A workmen's train eastbound from London was discharging passengers who were crossing the westbound tracks when a light engine, westbound,



Photo by International

### Scene of the Accident at Milton Range

ran into the crowd killing one man and injuring another severely. The light engine did not stop. This mishap delayed the train and allowed it to be overtaken by a following train which crashed into its rear end resulting in more casualties. A canal runs parallel to the railway at this point and many passengers on the standing train escaped injury by leaping into it when they saw the second train approaching. The second train for some unknown reason had left Gravesend in the face of a signal at stop against its movement.

### Reinforced Concrete Ties in Belgium

LONDON

After examining many types of reinforced concrete ties, Monsieur R. Deprets, chief engineer of the Belgian State Railways, has gone on record as in favor of the two following types. The "Calot" tie is of the through type, reinforced with 10 rods of about 3/8-in. diameter and having wooden cushions under either the chaired rail or the Vignoles rail. This tie weighs and costs more than a timber tie, and its weak point is reported to be the fastenings. The tie which Monsieur Deprets is inclined to favor is the "Vagneux," which consists of two blocks or "pots"



of reinforced concrete joined together transversely by either a steel joist or reinforced concrete tie. Both metal and wooden soleplates are used under flat footed rails on the Paris, Lyons & Mediterranean and the Nord railways on which lines this pattern has been tried. In this tie the fastening is more satisfactory, the holes for the screw spikes being formed in it, and bitumen then run in. It is hoped that this type of tie will be more economical than timber.

### Dutch Market for American Ties

Railway tie exporters in the United States will be able to sell their products in the Netherlands only when they meet the prices of German, Polish, and Finnish exporters, according to Commerce Reports. Red pine, beech, and oak ties are used in the country, the first-named species predominating. The average annual consumption is about 1,000,000 ties of all species, from 600,000 to 700,000 being used for maintenance of way and about 300,000 for new construction.

The estimates of the Dutch railways for the calendar year 1923 have, for reasons of imperative economy, been limited to the requirements for maintenance of way, no allowance whatever being made for new construction. According to this estimate there will be required for the period mentioned 500,000 red-pine ties and 75,000 of beech and oak. The Dutch railways will have a large stock of ties on hand at the end of the current year, and the new purchases will be more than ordinarily limited. The contracts for the ties required in the 1923 estimate will be let privately some time toward the latter part of the year. The Dutch railways have in the past received offers of American ties, but these proposals have been of little interest by reason of the high price. At the present time the Dutch railways are able to secure ties at 3 florins per tie, c. i. f. Holland. This represents, in American currency, about \$1.20.

Two standard types of ties are required by the Dutch railways. The dimensions of the first of these is 5 by 10 in. by 8 ft. 6½ in. An upper surface with a minimum of 7 in. in width is necessary. The other standard type differs from the first only in the requirement of a height of 6 in. instead of 5. Both types are required for main lines. A slightly smaller type of tie is used for local lines. This tie is 5 by 9 in. by 8 ft. 6½ in., with a minimum top width of 6 in.

So far as the quality of the tie is concerned, the Dutch railways require that they be of sound wood and appropriate for the purpose. The ties are purchased free from any preservative treatment and are creosoted by the Dutch railways at their creosoting plants at Dordrecht and Hilversum. There exists in the Netherlands no peculiar conditions which tend to affect the life

of the tie. The country has a sea climate, but it is devoid of extreme humidity.

American exports desirous of dealing with the Dutch railways may do so directly; in fact, it is preferable that transactions be handled in this way rather than through agents or importers. Purchases of ties for the railways are made by the Chief Engineer of the Dutch Railways, Railway Building, Utrecht, Netherlands. There are no formalities connected with the letting of these contracts. The chief engineer of the railways receives proposals from bidders by letter or in any other suitable form, embracing all the necessary details and references. Bids are furthermore not advertised for, and the letting is usually made toward the latter part of the year, when the railways find that they have received bids at a satisfactory price, and which are deemed to be advantageous. It is incumbent upon tie exporters to be on the lookout for this letting. The ties are approved by the Dutch railways when delivered in the Netherlands and paid for within four to six weeks after approval.

The only ties which the Dutch railways have purchased from the United States in recent years were a quantity which was received from Savannah and Gulfport during the war, which purchase was made necessary by the exigencies of the then existing situation in Europe. A quantity of Douglas fir ties was likewise purchased, but owing to difficulties attendant upon delivery they were later resold in the United States.

### China Notes

PEKING.

Proof copies of the sixth annual report on the Chinese Government Railways have been accessible to inquirers for several days. This report covers the calendar year 1920, and is appearing several months later than its counterpart during recent years. The revenues, expenses and income items for the combined lines reported are as follows (in round numbers):

Operating revenues .....	\$91,444,000	Increase \$8,400,000
Operating expenses .....	42,780,000	Increase 4,300,000
Net operating revenues.....	\$48,664,000	Increase \$4,100,000
Income debits (interest, etc.).....	\$11,223,000	Increase 900,000
Income credits (rents, etc.).....	3,347,000	Increase 1,100,000
Net income debits.....	\$7,876,000	Decrease \$200,000
Credit balance for the year.....	\$40,788,000	Increase \$4,300,000

This increase of over 10 per cent in the credit balance for the year is explained to be fully genuine, for the revenue figures contain a considerably smaller amount of military transportation, service stores and material for other railways than did those for 1919, the year previous. The operating ratio is only fractionally higher than in 1919, being under 47. In gaging these figures, it must be remembered that the last four months of the year 1920 were famine months. This is apparent when the increase of agricultural tonnage is observed,—especially on the Peking-Mukden line,—together with a large increase in the average haul per ton for this class of traffic. During those months, the government lines were hauling in grain from their extremities to the central plain, a large movement having been encouraged by a reduction of rates to the extent of 25 per cent.

The effects of the famine are to be read also in the estimated revenues for 1921, which are given as \$92,300,000, or barely a million more than the year before. This is the smallest increase during the seven years of uniform statistics. The decrease occurs principally in passenger traffic, famine refugees having been carried free,—and with them no doubt a considerable proportion which ordinarily paid third-class fares. Military disturbances, however, must bear a considerable share of this blame, for the months of those troubles show the lowest dip in the graph showing by months the average daily revenue. This is particularly marked upon the Peking-Hankow line, whose southern end was dangerous territory for most of the summer.

The third and last section of the Shantung Railway was evacuated by the Japanese police forces on May 6, whereupon the Chinese police assumed responsibility. However, within the former leased area of Kiaochau, Japanese police remain, and will not be replaced by Chinese until the final handing over of the territory which is expected to take place sometime towards the end of the year.

The Chinese banking group, which was expected to be incorporated with the international consortium, if that institution



P. & A. Photo

### The Baldwin Locomotive Works' Exhibit at the Brazilian Exposition, Rio de Janeiro

The wheels turn but the train does not move. The scenery moves, however, carrying out perfectly the illusion of a moving train

were to undertake anything in China, has justified the most pessimistic predictions of the "I told you so" band. About a year ago these columns contained the notice that this banking group had concluded a loan with the Ministry of Communications for the purchase of rolling stock. The amount of the loan was \$6,000,000 silver and the banking group superintended the offering and the opening of the tenders under which the equipment was purchased. During the past few months the ministry has been in default on the payments for this equipment, and the banks immediately discontinued payments of installments due to manufacturers. Thus, instead of being a group financing equipment purchases, the Chinese consortium has merely been a device for collecting one more commission on the purchase.

Some speculation is still being indulged in as to the possibilities of activity in connection with the international consortium. Local papers spread the rumor that the consortium was being withdrawn at the time F. W. Stevens, the American representative, left for America. The purpose of this was evidently to secure a denial, which was immediately forthcoming. Now that Wu Pei-fu has undisputed control of Peking, it is thought that some fundamental re-organization may take place. Anything of the sort will require financing, and no one but foreign powers would be so foolish as to advance any money to a government so palpably bankrupt as that of China at present. Yet the followers of Wu Pei-fu are probably the most consistently anti-foreign of any. Wu has been very careless of obligations to foreign countries. A late event is that of seizing the airplanes near Peking, although assurances had been given to the British legation that these planes were to be used for commercial purposes only. The recent re-organization of the Ministry of Communications has seen some eleven special commissions abolished. These were manned largely by students returned from America and this has been construed by some to mean an expression of Wu's resentment of foreign influence. However, if it has any significance more than of the necessity for retrenchment, this action probably is the result of the predominance of Japanese returned students, the present vice-minister being one. The present cabinet is none of Wu's choosing. On the other hand, Wu has decreed the destruction of the old Chiaotung ("communications") clique, even though this deprives him of the best technical assistance. This will remove perhaps the most effective barrier to China's availing herself of the benefits of the consortium. The "communications" clique was the most persistent opponent of the consortium, although somewhat secretly so, for it was well understood that consortium terms would deprive its members of "easy pickings" in some cases, and of the chief executive positions in others. Probably the threatened "loss of face" was the most real obstacle to an approach by China to the consortium representatives. With this clique gone, an opportunity will be afforded for the testing of this theory.

On May 20 the Tenth China-Japan Through Traffic Conference closed. The conference passed nothing of more than routine importance. The principal subjects up for discussion were the questions of a through passenger train between Peking and Fusan and through goods traffic between the South Manchurian and the Peking-Mukden railways. To both of these proposals, which have been put forward by the Japanese at several preceding conferences, the Chinese delegates put up determined opposition on the ground that domestic through traffic, both passenger and goods, had not been carried far enough to warrant its extension to international trains or bills of lading. It is doubtful if this opposition will ever be removed, unless the passing years show the South Manchurian Railway to be an instrumentality of commerce rather than an arm of military penetration. The conference went off very pleasantly up to the farewell dinner tendered by the Japanese delegates, in response to the many functions tendered them by the Chinese. At this dinner a Japanese guest, described as partially intoxicated, made such remarks to the Chinese Minister of Communications, and other Chinese delegates, that the incident has become almost of diplomatic importance.

A modern application of the ancient battering-ram was made by the retreating soldiers of Chang Tso-lin. Intent upon making entrance to Peking either for safety or loot, they boarded a passenger train and with it rammed the city gates where the railway enters. The casualties were not large, because the engine driver applied the brakes and jumped, but the debris thoroughly clogged the opening. The wall guards quickly disarmed—and plundered—the battering forces.

## Equipment and Supplies

### Locomotives

THE ST. LOUIS-SAN FRANCISCO is inquiring for 35 Mikado and 15 Mountain type locomotives.

MITSUI & Co., New York City, is inquiring for one side tank locomotive for export to Japan. This locomotive is to have a total weight in working order of 55 tons.

THE PENNSYLVANIA has placed orders for 15 new locomotives for passenger service to be built by the company's forces at Altoona, and for 100 freight locomotives to be built by the Baldwin Locomotive Works.

THE TAVARES & GULF has ordered two Prairie type locomotives from the American Locomotive Company. These locomotives will have 16 in. by 24 in. cylinders and a total weight in working order of 110,000 lb.

THE NORFOLK & WESTERN has ordered through Gibbs & Hill, New York City, from the American Locomotive Company, 4 double-unit electric locomotives. These locomotives will have a total weight in working order of 750,000 lb.

THE VACUUM OIL COMPANY, New York City, has ordered one six-wheel tank locomotive from the American Locomotive Company. This locomotive will have 21 in. by 26 in. cylinders and a total weight in working order of 160,000 lb.

THE WHEELING STEEL CORPORATION, Wheeling, W. Va., has ordered one six-wheel tank locomotive from the American Locomotive Company. This locomotive will have cylinders with dimensions of 21 in. by 26 in. and a total weight in working order of 160,000 lb.

THE SUPERIOR PORTLAND CEMENT COMPANY, Congress, Wash., has ordered one four-wheel tank locomotive from the American Locomotive Company. This locomotive will have cylinders with dimensions of 12 in. by 18 in. and a total weight in working order of 53,000 lb.

THE LOUISVILLE & NASHVILLE, reported in the *Railway Age* of August 26 as having ordered 30 Mikado type locomotives, has ordered 12 additional Mikado locomotives from the American Locomotive Company. These locomotives will have 27 in. by 32 in. cylinders and a total weight in working order of 320,000 lb. This road ordered also 8 Mikado type locomotives from the Baldwin Locomotive Works.

THE CHICAGO & NORTH WESTERN, reported in the *Railway Age* of August 12 as inquiring for 40 Mikado type and 10 Pacific type locomotives, has ordered this equipment from the American Locomotive Company. The Mikados will have 27 in. by 32 in. cylinders and a total weight in working order of 307,000 lb., and the Pacifics will have 25 in. by 28 in. cylinders and a total weight in working order of 273,000 lb.

THE CHICAGO, INDIANAPOLIS & LOUISVILLE, reported in the *Railway Age* of July 29 as inquiring for 5 Mikado and 2 Pacific type locomotives, has ordered 4 Mikado type and 3 Pacific type locomotives from the American Locomotive Company. The Mikado type will have 23 in. by 28 in. cylinders and a total weight in working order of 294,000 lb., and the Pacific type will have 28 in. by 30 in. cylinders and a total weight in working order of 237,000 lb.

THE MISSOURI-PACIFIC, reported in the *Railway Age* of September 2 as having ordered 25 Mikado type locomotives, has increased the order to 46 of the Mikado type and 4 of the Mountain type locomotives, all ordered from the American Locomotive Company. The Mikado type will have 27 in. by 32 in. cylinders and a total weight in working order of 320,000 lb., and the Mountain type will have 27 in. by 30 in. cylinders and a total weight in working order of 335,000 lb.



## Freight Cars

THE ELGIN, JOLIET & EASTERN is inquiring for 200 steel gondola cars of 50 tons' capacity.

THE NORTHERN PACIFIC has ordered 1,000 center constructions from the Western Steel Car & Foundry Co.

THE TEXAS & PACIFIC has placed an order with the American Car & Foundry Company for 150, 10,000 gal. tank cars of 50 tons' capacity.

THE CZARNIKOW-RIONDA COMPANY, 112 Wall street, New York City, has ordered 40 cane cars of 30 tons' capacity from the Magor Car Corporation.

THE ST. LOUIS-SAN FRANCISCO is inquiring for 1,500 steel frame, double hopper cars of 55 tons' capacity; 1,500 single sheathed box cars of 40 tons' capacity and 300 stock cars of 40 tons' capacity.

THE INDIANA GAS & COKE CO., reported in the *Railway Age* of August 19 as having ordered repairs from the General American Car Company to 50 hopper cars, is a mistake as the order went to the American Car & Foundry Co.

THE NEW YORK CENTRAL has let contracts for repairs to a total of 11,100 additional cars as follows:

### New York Central

- 2,000 box, Ryan Car Company.
- 1,000 box, American Car & Foundry Company.
- 1,000 gondolas, American Car & Foundry Company.
- 2,000 box, Illinois Car & Manufacturing Company.
- 500 box, Buffalo Steel Car Company.
- 1,500 box, Streator Car Company.
- 400 gondolas, Steel Car Company.

### Michigan Central

- 200 box, Streator Car Company.
- 1,000 box, Illinois Car & Manufacturing Company.

### Toledo & Ohio Central

- 500 gondolas, Ralston Steel Car Company.

### Cleveland, Cincinnati, Chicago & St. Louis

- 1,000 box, American Car & Foundry Company.

## Passenger Cars

THE CHICAGO ELEVATED RAILWAYS contemplate the purchase of 100 steel passenger coaches.

THE TENNESSEE CENTRAL is inquiring for three combination mail and baggage cars and for six passenger coaches.

THE CHICAGO, INDIANAPOLIS & LOUISVILLE has placed an order with the Pullman Company for 4 passenger coaches.

THE CHICAGO & EASTERN ILLINOIS, reported in the *Railway Age* of July 1 as contemplating the purchase of 17 baggage cars is now inquiring for 17, 70 ft. steel baggage cars.

## Iron and Steel

THE LOUISIANA & ARKANSAS has ordered 1,200 tons of structural steel from the Virginia Bridge & Iron Company for its shops at Stamps, Ark.

## Miscellaneous

THE SWEDISH STATE RAILWAYS has placed an order with S. K. F. of Sweden for anti-friction bearings on 176 passenger cars for heavy express service.

THE PENNSYLVANIA has placed contracts for a new floating elevator, and three steel grain barges for use at Girard Point elevator, Philadelphia, for the transfer of grain to vessels at other piers in the Delaware and Schuylkill rivers.

The new elevator will be built by the Pusey & Jones Company of Wilmington, Del. It will have a loading capacity of 13,000 bushels an hour, and will replace an old elevator, now in use, having a capacity of only 3,500 bushels an hour. The company has another elevator of 7,500 bushel hourly capacity. The three

new barges have been ordered from the Sun Shipbuilding Company, of Chester, Pa. They will be of 40,000 bushels capacity each, and will replace smaller ones. When the new barges are received, the combined carrying capacity of all the Pennsylvania's grain barges will be 184,000 bushels.

## Signaling

THE CANADIAN NATIONAL is installing automatic block signals between Cadorna, Que., and Chaudiere, 11 miles. The signals—style T-2, direct current, 25 signals—with other apparatus, have been furnished by the Union Switch & Signal Company.

THE DELAWARE & HUDSON has ordered from the Federal Signal Company a mechanical interlocking, 28 levers, to be installed at Schenevus, N. Y.; also an electric interlocking, 64 levers, for Mechanicsville, N. Y. The last mentioned is to be installed at the crossing of the Boston & Maine and the Delaware & Hudson and adjacent yard tracks.

## Railway Construction

ATCHISON, TOPEKA & SANTA FE.—This company will replace the Goddard avenue viaduct at Argentine, Kan., with a steel and wood viaduct.

CHICAGO & NORTH WESTERN.—This company closes bids September 9 for 250 bunk houses 20 ft. by 72 ft. to be constructed along its lines.

CHICAGO UNION STATION.—This company, which was reported in the *Railway Age* of August 12 as calling for bids for the construction of a concrete trucking subway extending north of Harrison street, Chicago, has awarded the contract to the Underground Construction Company, Chicago.

ILLINOIS CENTRAL.—This company has awarded the contract for depressing the tracks from Twenty-fifth to Forty-third streets, and raising tracks from Forty-third to Forty-ninth streets, Chicago, to the States Contracting Company, Chicago. Two tracks will be completed this year. This work is in connection with the new terminal project.

LEHIGH & NEW ENGLAND.—This company has awarded a contract to the Tilghman Moyer Company, for the construction of a concrete and brick freight station at Allentown, Pa., to cost approximately \$40,000.

MISSOURI PACIFIC.—This company closes bids September 13 for a passenger station 24 ft. by 100 ft. at Lake Village, Ark.

## Trade Publications

WOOD PRESERVING TERMS.—The Protexol Corporation, New York, has recently issued an 86-page booklet by Ernest F. Hartman and E. F. Paddock, containing a large list of wood preserving terms and their definitions. Many terms which are of a technical nature have been included as well as the more strictly industrial ones. In addition, references have been given to facilitate further inquiry and study.

STEREOPHOTOGRAPHIC SURVEYING.—A large size illustrated booklet has been published in the English language by the N. V. Maatschappij voor Landopmeting, The Hague, Netherlands, describing terrestrial and aerial stereophotographic surveying and its applications. The text discusses the advantages of the method which permits of surveying difficult or inaccessible sections without rodmen, etc., and without going over it. It also describes the various classes of work for which it is applicable as well as the way in which the survey and the office work are conducted. The illustrations show results of actual surveys under difficult conditions.

AN AGRICULTURAL INSTRUCTION TRAIN, organized by the Provincial Department of Agriculture and the Canadian Pacific Railway in co-operation with the Federal Department of Agriculture, is making a tour of the province of Quebec, finishing up at Quebec on October 31. There will be numerous exhibits of vegetables, grains, grasses and fruits. Illustrated lectures on agricultural topics will be given at each stopping point.

## Supply Trade News

**The Illinois Car Manufacturing Company**, Hammond, Ind., has purchased the American Nut Company of Columbus, Ohio. It is said that the acquired business will be moved to Hammond.

**The National Lock Washer Company**, Newark, N. J., is building a new two-story brick structure, 84 ft. by 40 ft., at the corner of Pennington and Hermon streets, the top floor of which will be used for office purposes and the ground floor for shipments. The company is also putting up a steel storage building 100 ft. by 60 ft. for additional storage purposes, and is also rearranging the equipment in its fabricating machine shop and making general improvements throughout the entire plant.

**The American Flexible Bolt Company** announces a complete reorganization with general offices at Zelienople, Pa. The reorganized company retains the original charter but has added additional working capital. There is also a complete change in the board of directors. **Stephen Robinson, Jr.**, is now president and in charge of sales; **H. T. Frauenheim**, vice-president; **Chas. A. Seley**, consulting engineer and district representative at Chicago; **J. A. Trainor**, Eastern district representative; **L. W. Widmeier**, Cleveland district representative; **W. S. Murrian & Co.**, Southern district representative; **E. F. Boyle**, Western district representative; **H. G. Doran & Co.**, Chicago, representative; **W. F. Heacock**, Chicago, representative. The plant management will be under the supervision of **L. Finegan**, formerly shop superintendent, Mt. Clare shops, Baltimore & Ohio. The purchasing will be handled by **Jas. F. McGann** at Zelienople, Pa.

### Federal Trade Commission Opposes Steel Merger

The Federal Trade Commission on August 31 issued a formal complaint charging that the proposed merger of the Midvale, Republic and Inland steel companies would be an unfair method of competition in violation of the federal trade commission act. The companies are given 30 days to file answers, after which hearings will be held. The commission says that after preliminary inquiry it has reason to believe that the merger of these three competing companies will center the control of some 35 corporations in one group and eliminate competition, restrain trade and tend to create monopoly in iron and steel products in interstate commerce. The Department of Justice had previously made a favorable report on the proposed merger. Commissioner Van Fleet voted against the issue of the complaint.

## Obituary

**Thomas B. Bryson**, vice-president and general manager of Holbrook, Cabot & Rollins, construction engineers, died at his home in New York City on September 5, at the age of 50.

**Frederick W. Cooke**, who was general manager of the Cooke Locomotive Works until 1914, died on August 30 at his summer home, Quogue, Long Island, at the age of 62. He was a graduate of Stevens Institute. His father, John Cooke, founder of the Cooke Locomotive Works, died in 1882, leaving the business to his three sons. They sold it in 1901 to the International Power Company, which later sold it to the American Locomotive Company.

TOURISTS FROM "THE STATES" spend in Montreal between \$30,000 and \$40,000 a day, or approximately \$6,000,000 for the six months from May to October, according to the secretary of the Automobile Club of Canada. For the province, he further states, the sum would be about \$15,000,000, as Quebec and other points attract large crowds. In the principal hotels of Montreal it is estimated 75 per cent of the guests are from the United States.

## Railway Financial News

**CHESAPEAKE & OHIO.**—*Asks Authority to Issue Preferred Stock.*—This company has applied to the Interstate Commerce Commission for authority to issue \$12,558,500 of cumulative convertible 5½ per cent preferred stock plus an amount equal to 20 per cent of the par value of any additional common stock issued prior to September 2, 1922, in conversion of outstanding 5 per cent convertible 30-year gold bonds.

**CHICAGO & ALTON.**—*Protective Committee for 3 Per Cent Bonds.*—A committee has been formed to look after the interests of the holders of the 3 per cent refunding bonds, due October 1, 1949. The members of the committee are: Charles A. Peabody (chairman), president of the Mutual Life Insurance Company of New York; Darwin P. Kingsley, president of the New York Life Insurance Company; John J. Mitchell, president of the Illinois Trust and Savings Bank, Chicago; W. A. Day, president of the Equitable Life Assurance Society; E. D. Duffield, president of the Prudential Insurance Company of America, and George E. Roosevelt, secretary of the Bank for Savings located in New York City.

There are \$45,350,000 of the 3 per cent bonds outstanding. In case it should become advisable the committee will issue a call for the deposit of the bonds.

Mr. Peabody, chairman of the committee, said: "It is very unlikely that the 3 per cent refunding bonds will be at all affected by the position of the Chicago & Alton. The purpose of the committee, which represents more than one-half of the total issue of bonds, is to watch the situation and be ready in case any necessity should arise. In that event, of course, further notice will be given to the bondholders."

**CHICAGO, INDIANAPOLIS & LOUISVILLE.**—*Asks Authority for Equipment Trust.*—This company has applied to the Interstate Commerce Commission for authority for the issue of \$725,000 of equipment trust certificates dated September 15, 1922, to be issued by the National Trust Company.

**LEETONIA.**—*Authorized to Abandon Line.*—The Interstate Commerce Commission has issued a certificate authorizing the abandonment of this company's line extending from a connection with the New York Central at Tiadaghton, Pa., in a southwesterly direction, 8.7 miles.

**NEW YORK, CHICAGO & ST. LOUIS.**—*Asks Authority for Equipment Trust.*—This company has applied to the Interstate Commerce Commission for authority for the issue of \$3,200,000 of equipment trust certificates dated September 1, 1922, and September 1, 1937, which certificates are to bear interest at 5, 5½ or 6 per cent.

**NORTHERN PACIFIC.**—*Equipment Trust Authorized.*—The Interstate Commerce Commission has authorized this company to assume obligation and liability in respect of \$4,500,000 of equipment trust certificates to be issued by the First National Bank of New York and sold at not less than 97½.

**OCALA & SOUTHWESTERN.**—*Authorized to Abandon Line.*—The Interstate Commerce Commission has issued a certificate authorizing the abandonment of this company's line from Ocala to Ray, Fla., 6 miles.

**SIoux CITY TERMINAL.**—*Authorized to Issue Stock.*—The Interstate Commerce Commission has authorized an issue of \$100,000 of common stock for the purpose of partially reimbursing the Sioux City Stock Yard Company for advances made for additions and betterments and other purposes.

**TEXAS & PACIFIC.**—*Guaranty Certified.*—The Interstate Commerce Commission has certified the amount of this company's guaranty for the six months' period following federal control as \$2,043,041, of which \$298,041 was still to be paid.

**WHEELING & LAKE ERIE.**—*Annual Report.*—The annual report



issued this last week shows the following corporate income account for the year ended December 31, 1921:

Railway operating revenues.....	\$14,770,707
Railway operating expenses.....	11,666,450
Net revenue from railway operations.....	\$3,104,257
Taxes and uncollectible railway revenue.....	1,068,509
Operating income.....	\$2,035,748
Non-operating income.....	176,188
Gross income.....	\$2,211,936
*Guaranty under Transportation Act, 1920.....	184,900
	\$2,396,836
Deductions:	
Equipment rents—net.....	\$257,730
Joint facility rents.....	22,662
Interest and discount.....	1,446,315
Total deductions.....	\$1,726,707
Corporate income for the year.....	\$670,129

\* Tentative additional accrual of "Compensation" for the guaranty period, (March 1, 1920, to August 31, 1920, inclusive) pending final settlement with Interstate Commerce Commission.

### Railroad Administration Settlements

The Railroad Administration reports the following final settlements, and has paid out to or received from the several roads the following amounts:

Indianapolis Union.....	\$765,000
Erie Terminals.....	3,300
Lake Superior Terminal & Transfer.....	27,600
The Mather Humane Stock Transportation Co.....	175,000
Savannah River Terminal Co.....	6,377
Bath & Hammondsport.....	19,500
Keokuk Union Depot Co.....	6,300
Atchison Union Depot & Railroad Co.....	7,500
Western Maryland paid Director General.....	800,000
Norfolk & Portsmouth Belt Line paid Director General.....	87,000

#### SHORT LINES

Wisconsin & Northern.....	4,800
Montana Western.....	4,000
Owasco River.....	6,000

The payment of these claims on final settlement is largely made up of balance of compensation due, but includes all other disputed items as between the railroad companies and the Administration during the 26 months of federal control.

### Dividends Declared

Beech Creek.—Fifty cents, quarterly, payable October 1 to holders of record September 15.  
New York, Lackawanna & Western.—\$1.25, quarterly, payable October 2 to holders of record September 14.  
St. Joseph, South Bend & Southern.—Common, 1 per cent; preferred, 2½ per cent; both payable September 15 to holders of record September 11.

### Trend of Railway Stock and Bond Prices

	Sept. 5	Last Week	Last Year
Average price of 20 representative railway stocks.....	73.07	73.09	56.08
Average price of 20 representative railway bonds.....	89.66	89.51	76.13

TIME FOR LABOR TO PURGE ITSELF.—The bold confession of a striker arrested in Chicago that he and several others, acting under instructions from union officials, entered into a conspiracy to wreck trains in Indiana and elsewhere, shows to what lengths such characters will go to accomplish their ends. As if to add insult to injury, the culprit is reported to have said: "What did we care how many we killed? We wanted to kill the fireman and engineer. The others wouldn't run trains if we killed a few engineers and a few firemen." While it would be manifestly unfair to thousands of other strikers to say that many are possessed of such a murderous spirit, it is not straining the point to say that such an attitude is altogether too common among members of labor organizations. Witness the cold-blooded, atrocious murders at Herrin, Ill. And this condition bids fair to continue so long as honest breadwinners permit themselves to be led by cowardly assassins. The men who toil have a perfect right to organize for mutual protection, but they should not permit themselves to be led into acts of violence at the behest of professional agitators who skulk in the background. When labor has purged itself of such leadership a better day will have dawned for unionism.  
—Deseret Evening News, Salt Lake.

## Railway Officers

### Executive

S. G. Lutz, vice-president of the Chicago & Alton with headquarters at Chicago, has been appointed chief traffic officer with the same headquarters. A. P. Titus, vice-president with headquarters at Chicago, has been appointed chief operating officer with the same headquarters.

### Financial, Legal and Accounting

Frank Scott, vice-president and treasurer of the Grand Trunk, has resigned and J. A. Yates, assistant treasurer, has been elected to succeed him as treasurer. Mr. Scott's retirement is under the railway's superannuation regulations and comes after 44 years of service.



F. Scott

He entered the service of the Grand Trunk in 1878 and in 1881 became chief clerk to the treasurer. Ten years later he was appointed secretary to the audit board and purchasing committee. In 1893 he was appointed assistant treasurer. In 1901 he was promoted to the position of treasurer of the company. In 1906 he became treasurer also of the Grand Trunk Pacific and in 1914 was elected a vice-president of the Grand Trunk System,

in which capacity he was serving at the time of his retirement.

### Traffic

L. R. Jones has been appointed assistant general freight agent of the Philadelphia & Reading with headquarters at Philadelphia, succeeding B. R. Boggs, resigned.

C. F. Moulton has been appointed general agent of the Denver & Rio Grande Western with headquarters at Ogden, Utah, succeeding W. B. Kenney, resigned.

J. T. Fitzgerald has been appointed superintendent of freight transportation of the Hocking Valley with headquarters at Columbus, Ohio, succeeding C. P. Torrey, deceased.

W. F. Lincoln, assistant general freight agent of the Union Pacific with headquarters at Los Angeles, Cal., has been promoted to general freight agent with the same headquarters succeeding T. M. Sloan, resigned.

J. L. Totten has been appointed assistant general freight agent of the Union Pacific with headquarters at Los Angeles, Cal., succeeding W. F. Lincoln, promoted to general freight agent succeeding T. M. Sloan resigned.

T. M. Sloan, general freight agent of the Union Pacific with headquarters at Los Angeles, has resigned. Mr. Sloan was born June 21, 1870, and entered railway service in 1885 as an agent and operator with the Chicago, Burlington & Quincy. Prior to his service in the Spanish American War in 1898, he was consecutively agent and operator on the Atlantic & Pacific and various other lines, and relief agent on the Santa Fe Pacific. From 1898 to 1921 he was agent and operator on the Santa Fe Pacific, and rate clerk, assistant general freight agent and general freight agent of the San

Pedro, Los Angeles & Salt Lake, and its successor the Los Angeles & Salt Lake. He has been general freight agent of the Union Pacific since November 1, 1921.

### Mechanical

**H. H. Stephens**, mechanical superintendent of the Southern lines of the Western district of the Atchison, Topeka & Santa Fe, with headquarters at Amarillo, Tex., has been appointed superintendent of shops at Topeka, Kan., to succeed **W. B. Deveny**, deceased. **E. E. Machovec**, division master mechanic, with headquarters at Argentine, Kan., has been promoted to mechanical superintendent of the Southern lines of the Western district with headquarters at Amarillo, Tex., to succeed Mr. Stephens. **W. R. Harrison**, master mechanic with headquarters at Chanute, Kan., has been transferred to Argentine, Kan., in place of Mr. Machovec. **G. F. Tier**, general foreman at Emporia, Kan., has been promoted to master mechanic with headquarters at Chanute, in place of Mr. Harrison.

### Engineering, Maintenance of Way and Signaling

**E. M. Hastings**, principal assistant engineer of the Richmond, Fredericksburg & Potomac, with headquarters at Richmond, Va., has been promoted to chief engineer. **C. E. Dare** has been promoted to engineer maintenance of way. Mr. Hastings entered railway service with the Baltimore & Ohio as a rodman and chainman in 1900, working during the summer of that year and the following one, and during the entire year of 1902. In 1903 he left the Baltimore & Ohio to enter the employ of the Richmond, Fredericksburg & Potomac as instrumentman, remaining in this position until 1906, when he was promoted to resident engineer. In 1920 he was promoted to principal assistant engineer in which capacity he continued until his recent promotion, effective August 15, to chief engineer.

### Special

**J. G. Hughes**, land assistant in the valuation department of the Atchison, Topeka & Santa Fe with headquarters at Chicago, has been appointed assistant commissioner of taxes with headquarters at Topeka, Kan., succeeding **E. T. Cartledge** who resigned on account of ill health.

**Walter S. Thompson** has been appointed publicity agent of the Grand Trunk Railway System, reporting to the vice-president and general manager. Mr. Thompson has hitherto been attached to the general advertising department in the position of editor of the press bureau. Previous to joining the Grand Trunk in 1914, he was engaged in editorial work on newspapers in Canada, Great Britain, Australia and New Zealand.

### Obituary

**W. H. Richardson**, general passenger agent of the Chicago & Eastern Illinois with headquarters at Chicago, died September 4.

**W. A. Drake**, assistant to the vice-president of the Atchison, Topeka & Santa Fe, with headquarters at Prescott, Ariz., whose death on August 19 was reported in the *Railway Age* of August 26, was born in 1848 at Franklin, N. Y. He took a course in civil engineering in the Delaware Institute and entered railroad service in 1868, with the New York & Oswego Midland railway, now the New York, Ontario & Western railway, with this company until the spring of 1871 he was consecutively, topographer, instrumentman and division and bridge engineer. From 1871 to 1876 he was engineer of the Rome, Watertown & Ogdensburg railroad. He was with the Syracuse, Geneva & Corning Railroad as contractor's engineer from 1876 to 1878. On this date he entered the employment of the Atchison, Topeka & Santa Fe and served as division engineer until 1879. From that date to 1882 he was locating and resident engineer of the Atlantic & Pacific Railroad. On the latter date he was promoted to chief engineer of that road and retained this position until 1885. When he was appointed assistant engineer of the Atchison, Topeka & Santa Fe in Kansas and Indian Territory. During the following year he was in charge of the Denver & Canon City

extension of the same road. In 1888 he was appointed superintendent of the Western division and remained in this capacity until 1891, when he entered the private practice of civil engineering for a year. From 1892 to January, 1895, he was assistant chief engineer of the Santa Fe, Prescott & Phoenix railway. From the latter date to July 1, 1920, he served successively as chief engineer, general superintendent and chief engineer, and general manager of the same road now known as the Santa Fe, Prescott & Phoenix lines, Atchison, Topeka & Santa Fe. His next promotion was on July 1, 1920, when he was appointed assistant to the vice-president, the position he held at his death.

**Will Nicholson**, formerly general colonization agent of the Atchison, Topeka & Santa Fe and later of the Kansas City Southern, died suddenly from ptomaine poisoning on August 30. At the time of his death he was secretary of the Associated Almond Growers of Paso Robles, with headquarters in Chicago.

**Henry G. Herbel**, general attorney and interstate commerce counsel of the Missouri Pacific with headquarters at St. Louis, Mo., whose death on August 11, after an illness



H. G. Herbel

of less than a week, was reported in the *Railway Age* of August 26, was born September 27, 1857, at Afton, St. Louis county, Mo. He was graduated from Washington University, St. Louis, in 1879, after studying law at night. In 1876, while attending Washington University, he entered the service of the St. Louis, Iron Mountain & Southern as a clerk in the law department. He was promoted consecutively to the positions of chief clerk, assistant attorney, assistant to general solicitor and general attorney.

More recently he was appointed interstate commerce counsel in addition to his position as general attorney. Mr. Herbel's entire railway service was with the St. Louis, Iron Mountain & Southern railroad and the Missouri Pacific.

CONSTRUCTION HAS BEEN resumed on the extension of the branch line of the National Railways of Mexico which runs from Monclova to Cuatro Ciénegas, about 50 miles. The extension is to run to Sierra Mojada, about 100 miles. It will connect at that point with the Mexico Northern, which in turn connects with the El Paso-Chihuahua division of the National Railways of Mexico at Escalon. The importance of the new line lies in the fact that it will be the means of forming a new through railroad route across a broad scope of northern Mexico. On its route are important coal fields which are as yet undeveloped. The chief purpose of the Mexican government in undertaking the building of this extension at this time is to give employment.

THE PARIS-ORLEANS RAILWAY (France) has placed an order for 80 electric locomotives with the Société Oerlikon and the Société de Construction des Batignolles both of Paris; these locomotives are each for a one hour rating of 1,720 hp. The Société Oerlikon is to supply and erect the electrical equipment, while the Société de Construction des Batignolles deals with the mechanical part. Except in the case of the five first locomotives, which will be completed at the Swiss works of the Ateliers de Construction Oerlikon, and will serve as models, the whole electrical equipment will be built in France, to the Oerlikon design, at the works of the Société Oerlikon. The locomotives are specially intended for freight trains and are to be capable of hauling a load up to 1,200 tons; they are, also to be suitable for passenger service, in which case a speed of about 68 miles per hour must be attainable.